Archaeological Field Survey of the Neolithic and Chalcolithic Settlement Sites in Kyrenia District, North Cyprus: Systematic Surface Collection and the Interpretation of Artefact Scatters

Volume 1
Text

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1998

I, Müge Hüseyin Şevketoğlu, declare that this thesis was written by me, that the work described in it was carried out by me, and that I am the sole author. Any assistance with the work described in this thesis has been duly acknowledged and attributed.

Müge Hüseyin Şevketoğlu

To Naomi

"when I am angry at someone or something I do the work I am doing even better to take revenge"

Levent Kirca (Theatrical Artist) 1995 interview

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Acknowledgements

I would like to thank my father, Huseyin Mustafa Sevketoglu who supported me with his financial generosity during my stay in Edinburgh and when my survey project regularly went into financial crises. I would also like to thank my father for introducing me to the archaeology of Cyprus at a very young age, and I am sorry I was car sick so often during our outings, especially on the way to the then newly discovered Paphos mosaics. Thank you for discovering GRP 97, catching fresh fish for the survey team, and for patiently translating the publications which were in Greek, for my thesis. The next person I must thank is Naomi, for reading the text over and over again. For always believing in me, for her companionship and her help in so many aspects of my work and life, I thank her. To my mother Arife Kandulu whose support, during my early days of fighting within the family for the right for women to have higher education, was an avenue to a PhD. Thanks also to my brother Mustafa for lending me his 4x4 drive.

There are many other people in Cyprus I must thank for helping to make this project a reality. The Director of Museums and Antiquities of the TRNC, Mr Ali Kanli, and his assistant Mr. Tuncer Bagiskan, and the Ministry of Education and Culture for granting a permit for my survey. Colonel Halil Giray, Director of the TRNC Map Office and his team for their help. Rasime Oner, friend and colleague from the Department of Antiquities, Kyrenia Castle, for accepting the post of government representative for my survey without any pay. She also helped with the survey and became an inseparable part of our team. Another friend Munevver Tantura, museum officer of Kyrenia Castle, for doing our shopping and for her support. Mr. Ayhan Ozar, director of the Kyrenia District for allowing us to take over the castle with our surface finds and team members. Mr Mehmet Necdet of the TRNC

Geology and Mineral Resources Department was of assistance in identifying various rocks and minerals. The North Cyprus Air Association kindly allowed use of a microlight, the pilot was Mr. Akyuz from the Turkish Air Association.

I cannot thank enough my friend and colleague Jacqueline Gilbey, who joined my project as a trainee student and became an invaluable friend. Thank you for sharing the joys and stresses of two seasons of hard work with the survey and for your splendid pencil and ink drawings. The latter were done over the summer of 98 in Edinburgh. I am sorry I always dragged you to places with two extremes of climate. Many thanks also to Fiona Stephen for being a friend pulling me along and those encouraging coffee meetings, as well as last-minute reading of several chapters, and her husband Karl for replying to my emergency computer crises at uncivilised hours of the day.

Thanks are due to various people in the Department of Archaeology at Edinburgh University. To my supervisors Professor Eddie Peltenburg and Dr. Trevor Watkins for their supervision, especially for Trevor who read my thesis at crucial times and had a sharp eye for things I missed out as well as making comments and sharing his ideas which all helped in shaping my survey method and thesis, and to Eddie for sending me to Mezarlik (I hope it was not literally!). Many thanks to Ian Morrison, the computer expert who spent years finding programmes and solving problems, for his assistance without which I would not be able to come out with such a "colourful" result with the graphs. Another emergency responder was Kevin Hicks from the Centre for Field Archaeology who rushed out on my last day in Edinburgh before finishing this thesis, and helped in many ways with computer graphics; and to Gordon Thomas who helped with the last-minute details in the drawing office. Also Pat Storey, our departmental secretary who was always ready to help sort out those little details which matter so much. Stuart McCarrol from Edinburgh University Computer Services was also of great assistance.

Thanks to all the animal bone experts in Britain who identified the cattle bone from Ciftlikduzu, especially Dr. Louise Martin from the Catalhoyuk Project. Also to Michael Vickers, Assistant Keeper of the Ashmolean Museum, for assistance with looking at the Cypriot collections there.

To my many sponsors I offer very many thanks for their great support and list them here:

The Sevketoglu Group of Companies; The British High Commission for a scholarship for the first year of my studies; The International Federation of Women Gratuates, Dorothy Leet Grant Academic Award, Switzerland, for paying the living expenses for my final year. The original grant was set up by her to enable American women to see the world beyond their own and then to help raise awareness and acceptance amongst those who neither knew nor acknowledged a world different than theirs and believed that the world was flat! I hope her wish, to expand narrow views and knowledge, has in a way been accomplished: for North Cyprus, the country and archaeology declared "inaccessible" and rejected by a few scholars who will not recognise the work carried out; and for some who love to know about it and are not allowed by the same group of people. Here it is, take it or leave it, your refusal does not change the fact that archaeological work exists and it happens; The British Federation of Women Graduates Charitable Foundation, Britain, paid towards my living expenses for one year. The Tweedy Exploration Fund of Edinburgh University, The Prehistoric Society of Britain, Naomi Hamilton and Sevketoglu Group of Companies, all paid towards the fieldwork costs; Cyprus

Turkish Airlines gave reduced fares for the team for the 1995 field season and Istanbul Airlines President Holidays gave reduced fares for the 1996 field season.

The survey would have been impossible without the students who helped with the survey, Catrin Lewis, Chris Wilbraham, Helen Moore, Rachael Every, Robert Golding and Arthur Taylor-Nottingham.

Finally thanks go to all those who tried to stop me doing this research; it made me even more determined to finish it.

Abbreviations

Bibliography

Act. A.	Acta Archaeologica
AA	American Antiquity
ARA	Annual Review of Anthropology
ARDA	Annual Report of the Director of Antiquities, Cyprus
A.Dia.	Archaeological Dialogues
A.Anz	Archaeologischer Anzeiger
ASOR	American Schools of Oriental Research?
BAR	British Archaeological Reports
BASOR	Bulletin of the American Schools of Oriental Research
EMC	Echos du Monde Classique/Classical Views
CAJ	Cambridge Archaeological Journal
MA	Mediterranean Archaeology
MAN	A Monthly Record of Anthropological Science
RR	Recherches et Rencontres
RDAC	Report of The Department of Antiquities Cyprus
SIMA	Studies in Mediterranean Studies
Op. Ath	Opuscula Atheniensia
PS	The Prehistoric Society
PPS	Proceedings of the Prehistoric Society
JFA	Journal of Field Archaeology
JWP	Journal of World Prehistory
SCE	Swedish Cyprus Expedition
WA	World Archaeology

Sites

AEM 95	Ayios Epiktitos-*Mezarlik*
BVS 96	Bellapais-*Vasiliki*
DCD 96	Degirmenlik -*Cukurdere*
DDP 96	Degirmenlik -*Dumlupinar*
DKM 96	Degirmenlik-*Kemer*
EDT 95	Edremit-*Haci Ismail*
GKB 96	Goceri-*Koca Belenk*
GRP 97	Esentepe-*Agirsu* (Green Peace)
TKY 96	Tatlisu *Kuyu Mevkii*
TCD 96	Tatlisu-*Ciftlikduzu*
KYA 95	Karsiyaka
KYR 95	Kayalar
KRN 95	Kirni
KEK 95	Kucuk Erenkoy-*Seslikaya*

General

TRNC	Turkish Republic of Northern Cyprus
ox	Open body sherd
cx	Closed body sherd

Foreword

The fieldwork reported in this thesis was carried out with a permit granted by the Department of Antiquities and Museums of the Turkish Republic of Northern Cyprus, in accordance with the regulations.

This thesis is presented in three volumes, to enable the reader to use different types of information in conjunction with one another. Volume one consists of the text, appendices and bibliography. Volume two contains figures in the form of graphs and tables, arranged in continuous numerical order starting from one and all prefixed by 2, signifying volume two. Plates and maps are also in this volume. Volume three contains figures in the form of drawings of artefacts, also arranged in continuous numerical order, starting again from one but all prefixed by 3, signifying volume three.

The referencing system used is "author-date". Throughout the text 'Times' font at 12 point size was used. The author has prepared all the graphs, plates, maps and inked most of the illustrations (except the ground stone). All the deficiencies of this thesis and its contents can only be attributed to the author.

Abstract

For nearly 24 years, the archaeology of northern Cyprus has not been investigated as thoroughly as that in the southern part of the island. All foreign projects, which are responsible for the substantial majority of the archaeological work in Cyprus, are active in the south. This has created a major imbalance in our knowledge of the prehistory of the island. The new discoveries in the south have advanced our knowledge of the prehistoric period in Cyprus in many ways, but at the same time the lack of archaeological work in the north makes these potentially biased, and theoretical approaches cannot be confirmed without knowledge of the whole island. This thesis is an attempt to narrow this gap by applying a survey method that has not been applied on such a large scale in Cyprus before, with new interpretative aims and methods. The period of interest is from the Aceramic Neolithic to the end of the Chalcolithic, approximately 7,500 - 2,800 BC.

The survey was carried out in Kyrenia district, Turkish Republic of Northern Cyprus, over two field seasons. A total of twenty-eight sites was selected according to their surface richness from Stanley Price's gazetteer of sites published in 1979. Out of these sites twenty-two had surface finds, three had no surface finds and three were not found. In addition to these sites two previously unknown sites were discovered and surveyed. The method of survey was two-fold. The first was intensive total surface collection using a five metre grid, with results fed into a mapping programme to create scatter maps showing artefact distribution. The second was extensive area survey, which involved systematic field walking accompanied by surface collection.

This thesis comprises an overview of previous surveys in Cyprus, explanation of methodologies used for the current survey, discussion of the survey results, and comparisons with results from excavations and other surveys. Questions regarding the interpretation of surface scatters, the shifting and drifting of settlements, and the cultural homogeneity of Cyprus during the period of interest are also addressed.

Chapter 1

Introduction

1.1 Introduction

In the 1950's when the Cyprus Survey was initiated, Kyrenia district became the most heavily surveyed area in Cyprus. More sites were added to those already known in the populous centre and south of the island, although no systematic work was done. The western part of the island, and the Karpas peninsula in the east, were the least surveyed areas. After independence in 1960, foreign teams were invited to undertake fieldwork in Cyprus, and although excavation was the main aim, a number of surveys took place. After the division of Cyprus in 1974, the southern part of the island continued to witness international archaeological research on a large scale, and many survey projects were initiated in areas where land consolidation programmes were carried out. Some of these surveys were later followed by excavations. However, in the 24 years since 1974, knowledge concerning the northern part of the island has stayed more or less the same. The majority of archaeological fieldwork carried out in the north has consisted of small rescue excavations. As more sites were excavated and surveyed in the south, presenting new information and changing our views about the prehistoric periods, the archaeology of the northern part of the island became segregated and "unknown".

The inevitable developments on the island in the areas of agriculture, building, infrastructure etc. have added urgency to the re-assessment of previously known sites, and to the presentation of the results to the *Yuksek Anitlar Kurulu* (Higher

Council for Monuments) committee. This acts for the protection and scheduling of archaeological, historical and cultural monuments and artefacts, for their protection or listing under the Sites and Monuments Record established as a computer database in 1989 (Sevketoglu, 1989) and updated since then. All the archaeological sites dealt with in this thesis are now in the process of being listed. It is now one of the priorities of the Department of Museums and Antiquities to have previously recorded sites re-assessed for future protection, but due to a shortage of trained and experienced staff this has been limited so far to the well-known sites or those visible above ground. The self-funded project reported in this thesis, run by an experienced professional field archaeologist, is therefore of great value in protecting the heritage of Cyprus.

It was with the ambitious aims to re-open the archaeology of the north of the island, re-assess the information concerning known sites, and check the current condition of sites to enable protection plans to be drawn up, that I undertook a survey of the prehistoric sites in Kyrenia district during the spring and summer of 1995 and 1996. A total of 22 known sites was re-surveyed, and several more were discovered. These are indicated on Map 1. Here I present the varied results of two seasons of field work, drawing to the attention of scholars the prospects of archaeological research that have been hidden and forgotten for a quarter of a century.

The main aims for the survey were: re-investigating sites with current knowledge in mind; defining the chronology further; investigating cultural homogeneity; and examining indications of multi period and shifting and drifting settlements through differential distribution of artefact scatters. During the course of survey various other aims developed including colonisation of the island and external contacts with the mainland, variations in site size and location, and the identification of the activity areas by means of surface scatters.

1.2 Choice of Area for the Survey

As stated above, Kyrenia district was once the most surveyed part of Cyprus. This might make it seem a strange choice for further work. However, there were several reasons for my decision, both academic and practical. Many of the excavated or trenched sites in the north of Cyprus - a considerable number of which are within Kyrenia district - were dug in the first half of this century when the understanding of the prehistoric periods was poor. It was on the basis of these excavations that many of the surveyed sites were classified within one or another cultural period, and the date of some of these has recently been a matter of debate. One of my purposes in re-investigating known sites was to assess them in the light of current knowledge, much of it gained from excavations in the south since 1974. Therefore a new survey of the sites could update the information concerning a large number of sites within a short time frame and with limited resources.

Kyrenia district is a popular area to live in, and a great deal of general and touristic development has occurred in the past decade. As the expansion of the town itself is limited by the mountains, development has spread along the coastal strip. Prehistoric settlement sites are particularly vulnerable to damage due to their invisibility to the non-expert, unlike tomb sites which are easy to recognise. For this reason the archaeology of the area needed to be re-appraised, and survey is an appropriate tool for such a project.

Practicality also led to my choice of area. I had been employed for several years in Kyrenia district by the Department of Antiquities and Museums, and was therefore well acquainted with many of the sites in the area. I also had a work base in Kyrenia Castle and excellent relations with the local archaeological staff, both of which were invaluable assets. In addition, the artefacts from Peltenburg's excavations at Ayios Epiktitos-*Vrysi* and his 1973 survey in Kyrenia district are stored in Kyrenia Castle. As I do not have access to the south of Cyprus, and therefore to the Cyprus Museum, the sites, and most of the archaeologists working in Cyprus, a study of this material was to form an important addition to my practical knowledge concerning the artefacts of the Late Neolithic and Chalcolithic periods. Finally, my home is near Kyrenia, and was used to accommodate the survey team. Thus there were financial advantages in terms of work and living space in addition to other practical reasons for choosing Kyrenia district.

1.3 Choice of Periods for the Survey

This survey covered sites dated to the Aceramic Neolithic, Late Neolithic and Chalcolithic periods. Apart from the fact that my main interest is in prehistory, there are some cogent reasons behind this choice. As explained already, there are many questions about the prehistoric periods which need answers, and there are particular issues concerning the dating of several prehistoric sites in the north arising from their early excavation, and the lack of detailed assemblages of Late Neolithic and Chalcolithic cultures at the time that dates were assigned to them. Although the Aceramic was reasonably well understood several decades ago, the Late Neolithic is still poorly represented in the archaeological record, and the Chalcolithic was barely defined beyond the broadest definitions of pottery types before 1974. Therefore to choose a single period, rather than the range of periods selected for this project, would have required pre-judgement of the date of sites, whereas the aim was to re-examine old interpretations in the light of new information. As will be seen in this thesis, this approach has been vindicated by the re-dating of some sites, the discovery of material of more than one period on others, and evidence supporting an earlier date for the start of the Aceramic than previously thought.

Another reason to choose these periods was that a large number of prehistoric sites had been found in the past in Kyrenia district, and this seemed to offer the potential for plenty of data, so that a refinement of dating within broad cultural periods might be attempted. Although several important prehistoric sites have been excavated in the past in northern Cyprus, some of them in Kyrenia district, great advances have been made in the understanding of prehistoric cultures in the past 24 years exclusively in the south of the island. Therefore it seemed that a survey and re-assessment of the prehistoric sites in the north would be beneficial both in terms of refining the information about sites in the north, and giving feedback to archaeologists working in the south.

Finally, prehistoric settlement sites are good subjects for a low tech, intensive survey such as mine. Unlike the cemetery sites, they have not been the subject of extensive excavation, legal or otherwise, over the past two centuries, and often remain untouched by the landowners. Intensive survey is a good tool for finding prehistoric settlement sites, many of which could be missed by general extensive field walking or the examination purely of known artefact concentrations. The combination of intensive and extensive survey in the current project was particularly well suited to investigate certain issues currently of interest concerning prehistory, such as the shifting and drifting of settlements, and multi-period settlements.

1.4 The Geology of Cyprus

The island's geology and land formation must have played a very important role in the choice of sites for settlement in the prehistoric period. Understanding the geology and the formation of the landscape in Cyprus is important for archaeologists. They help towards explaining why certain areas were favoured for settlement during the prehistoric periods. The "settlement patterns" are actually dictated by the specific geology, land formation and other features that attracted settlement. In order to study changes in settlement pattern, archaeologists need to study the landscape of the area of work, which will also assist in predicting where similar sites could be found. The change in settlement patterns during the prehistoric and historic periods tends to be related to the geographical landscape and resources as well as to social factors.

Today, the island is simply described as having two ranges of mountains: the Kyrenia range, more commonly known by Cypriots as Five Fingers (Besparmak in Turkish and Pentadaktylos in Greek) in the north; and the Troodos mountains in the south (see Map 2). The Kyrenia range is a ridge made up of limestone and Hilarion marble or dolomite, the Troodos is a volcanic massif surrounded by upthrust limestone. Between the mountains is the largest area of flat land in Cyprus, the Mesarya plain (from the Greek Mesaoria meaning "between the mountains").

Originally the Kyrenia range and the Troodos massif were two separate rocky islands divided by water. Later on they became linked by the rising sea bed which created the Mesarya plain. The same geological processes which created the bulk of the cultivable land in Cyprus - the central Mesarya plain - also created a series of terraces descending gradually down the mountains towards the sea.

Long pauses between periods of rapid uplift resulted in a series of natural terraces along both faces of the Kyrenia range.

The northern coast is probably one of the most dramatic landscapes in Cyprus. The sandy beaches, decorated with small headlands and natural harbours are fed with fresh spring waters running down from the skirts of the mountains through a three mile stretch of gradually and sometimes dramatically declining lands. The coast has many natural harbours in which little boats can take refuge.

The south face of the Kyrenia Range is rather different The geology below the mountains is a continuation of the Kythrea Flysch rocks which occur on both sides of the mountain. These rocks were originally lying in great horizontal slabs, but have been pushed up in their homoclines by the same gigantic earth movements that formed the Kyrenia mountains. To a certain extent the south face geology and land formation is a mirror image of the north face. The difference is that the south face of the mountains opens into the flat plain of Mesaoria, which continues to the Troodos massif, and rise less steeply than the north face. Around the edges of the Kyrenia mountain a series of high escarpments with deeply cut ravines stand with a sudden sharp fall into a land of small hills. From the height of these escarpments, springs feed perennial rivers and streams.

The differing geology on either side of the mountains is reflected in the archaeology as well. While the north face has many prehistoric sites, those of later periods are scarce. On the south face, for example at Degirmenlik, sites of both prehistoric and historic periods are found within the same small area. Presumably this relates partly to the geography and economic potential of the regions, in addition to possible socio-political reasons, as this is the area with rich agricultural potential. The coastal plain in the north is very narrow, restricting the expansion of agriculture, but the northern face sites are all within reach or view of the sea, offering another natural resource.

1.5 Vegetation and Land Use

The vegetation of the island is of Mediterranean type with mixed shrubs and forests. The vegetation of the northern area differs considerably from that of the Troodos area. Before the major forest fire of June 1995, much of the Kyrenia Range was covered with cypress and Aleppo pine forest and well developed maquis. The area has now been reforested. Small stands of eucalyptus can also be was found in many areas, especially those which suffered from swamps in the recent history of the island. It occurs particularly on the south side of the Kyrenia range, in the Mesarya plain, as well as around Guzelyurt (Morphou - both names meaning "beautiful land"). Eucalyptus was introduced to the island from Australia during the British period to dry up the malarial swamps, and although malaria was eventually eradicated with DDT, the eucalyptus continues sucking up the fresh water, which is problematic in the drought conditions which now prevail in the north.

The vegetation and landscape is dryer on the southern side of the Kyrenia mountains than the northern side. This is due to microclimates that affect Cyprus. The mountains prevent the rain clouds from crossing over the mountains, therefore the northern side of the Kyrenia mountains receive more rainfall, while the south side is warmer than the north. The water and the temperatures affect the vegetation of the two faces, and the vegetation of the northern face is richer and more varied than that of the southern face. Since the springs on each side of the mountains have a common water table, farmers on both faces of the mountains take advantage of them On the whole agriculture in Cyprus is weather dependent; rain is expected to come at the right time of the season for the crops, and there are no water channels into the fields for irrigation.

1.6 Outline of Thesis

In the following pages I shall outline the topics dealt with in this thesis chapter by chapter. There are three volumes which need to be used concurrently for a clear understanding of the information contained in chapters five, six and seven, which deal with the data collected during the survey. The entire text is in volume one, including the appendices. Volume two contains the distribution graphs, data tables, bar charts and pie charts which illustrate the survey data, plates showing the sites themselves, and the maps. Volume three contains drawings of a large selection of artefacts.

1.6.1 Survey in Cyprus

Chapter two is a review of the history of survey on Cyprus, and examines the development of field survey methods and the developments in understanding the Neolithic and Chalcolithic periods. There are four sections to this chapter. The first section covers the period between the 18th century travellers and antiquarians, focussing on their methods of exploration until 1928 when the first archaeologists began to appear. The second section covers the period between the 1928 until 1960 during which significant achievements were made both in survey and in understanding the Neolithic and Chalcolithic periods. The third section looks at the period between 1960 and 1974, when methods of survey were standardised and the excavations of Neolithic sites contributed heavily to understanding the prehistory of the island. The fourth section looks at the period between 1975 and 1996. During this period foreign fieldwork ceased in the north, and projects are carried out solely in the southern part of the island. This was a time when the methods and the aims of surveys were changing according to the modern day developments. The tourism boom on the island threatened - and continues to threaten - the archaeological sites, which has changed the course of some surveys. Specifically survey-based projects were established, and methods changed to cope with the short time scales available for work. The discoveries made during the excavations at the Chalcolithic site of Lemba brought new understanding of aspects of Cypriot prehistory. This last section includes a critical view of recent surveys in Cyprus.

1.6.2 Research Design and Methodology

Chapter three concerns my research design and methodology. The four main aims of the survey project are explained, forming the background to the choice of methodology in the field. In response to my criticism of a lack of methodological detail in the publication of other surveys, all aspects of research tools and methods are explained in detail in this chapter. While it may appear that some of the information is extremely basic, my review of other surveys has revealed how little of this basic information is normally provided, making it very difficult for investigators to assess how similar or different their methodologies are. Therefore topics included in this chapter include the team size, field tools, site codes, post-survey recording systems, storage of artefacts, drawn records, maps series' used, and aerial photography, as well as an explanation of the aims of the survey project, the various field methods employed and how they were chosen, issues of site extent, and analytical tools such as the computer programmes needed to generate the distribution diagrams found in volume two. The field survey was carried out using three basic methods - grid survey with total collection, intensive field walking, and extensive survey. In addition to these planned methods, random survey was carried out on sites discovered unexpectedly when the survey team was not available, and artefacts handed in by a landowner have been included in the data for one site.

1.6.3 Classification of Artefacts

Chapter four deals solely with the artefact classification systems used for the survey. After a brief discussion of the problems surrounding systems already in use in Cyprus, each major artefact type - chipped stone, pottery, ground stone, and axes, is dealt with in turn. These sections cover the reasons for the choice of classification system, with reference to other systems in use; terminology; how measurements were taken; and the recording sheets used for each category of artefact.

1.6.4 The Survey Data

Chapters five, six and seven are reports of the field work carried out in 1995 and 1996, with incidental work from 1997. Each chapter covers a separate arbitrary geographical area - chapter five the north west coast, chapter six the north east coast, and chapter seven the southern face of the Kyrenia Mountains. Each chapter is divided into separate survey areas, some of which may contain several sites, others only one. The precise information included varies according to the number of sites in the area, and the level of research carried out prior to the 1995-6 survey seasons, but in general it covers topographical and environmental notes, a review of past research in the area or at the site, followed by a report on the work carried out in 1995 or 1996. This report includes details of the location and size of sites, the type of survey carried out, and a summary of finds including the relevant illustrations in volume three. An analysis of the data follows, taking each of the major artefact categories in turn, assisted by reference to many tables, diagrams and distribution graphs as well as plentiful drawings of artefacts. A conclusion is drawn concerning the artefact distribution on each site, and the implications this has for understanding the archaeology. Where large areas with several sites have been surveyed, there is also a general concluding discussion about the area.

1.6.5 Discussion and Comparisons

Chapter eight deals with comparisons on a number of levels. Each period is treated separately and relevant topics are discussed first with reference to the sites surveyed for this project, then with reference to excavated sites of the same period. Sites and villages mentioned in the text which were not surveyed for this project are shown on Map 3. A number of issues which became apparent during the research period are discussed in this chapter: external contacts, colonisation of the island, and variations in site location and size. The topics examined for the Aceramic period are topography, site size, material culture, external contacts and colonisation. The discussion of the Late Neolithic considers topography, material culture, architecture and external contacts. The Chalcolithic period comparisons cover material culture, topography, tomb architecture and external. The question of homogeneity of culture in Cyprus is addressed in this section

1.6.6 Conclusions and Future Research

Chapter nine draws conclusions about the success of the survey project in achieving the four main aims plus the aims developed due course of survey, as well as about the success of different survey methods, the usefulness of intensive survey in answering questions that excavation may fail to answer, and the suitability of the computor programmes for the tasks I was attempting to carry out. It concludes with a few suggestions for future research.

Chapter 2

The History of Survey on Cyprus

> "Reconstructing history from the earth is a process full of methodological pitfalls; new discoveries may prove wrong tomorrow what seems plausibly established today" (Maier & Wartburg 1985: 143).

2.1 Introduction

In this section, I will examine the development of knowledge of the Neolithic and Chalcolithic periods in Cyprus and the development of field survey techniques. I find it useful to divide this into four parts, which represent the turning points of archaeological work in Cyprus. These coincide roughly with the political history. The first is the period from the 18th century antiquarians to the beginning of the first scientific work in Cyprus; the second period is from the first foreign mission in the island from 1928 to independence in 1960, covering the work of Gjerstad, Dikaios and Catling; the third is from Catling to the division of the island in 1974; and the fourth is the period from 1975 to recent times.

2.2 The mid-18th Century to 1928

Searching through travel books of the early travellers, antiquarians and archaeologists one can be amazed at the detailed description of the sites given by the writers. Almost all travellers and/or antiquarians of this period who were "interested" in archaeology travelled by means of mules, the standard transport of the time on Cyprus, and described the sites of interest they passed through. Some became interested because they happened to be in Cyprus - a country rich with antiquities - for commercial, diplomatic or personal reasons; others went there in search of the past. The sites mentioned were mainly architectural remains of the later period, still visible above the ground. Sites such as Salamis, Kition and Enkomi were among those commonly visited. The person who initiated the digging up of antiquities and probably first gave fame to Cypriot antiques is Cesnola. However, he was not the earliest to explore or write about Cypriot ruins.

2.2.1 The Eighteenth Century: Pococke and Maritis

Richard Pococke was a mid 18th century traveller in the Levant who published accounts of his journey (Pococke 1743: vol. 2: 210-235). When he arrived on Cyprus he wasted no time - that same day he hired mules at Larnaka and started his journey around the island under the protection of the janissaries provided for him by the consul. His main observations and descriptions in his book are about the mediaeval town walls, towns and the Christian places of worship. During his travels he made note of a mound and the possibility of it being 'ancient work' (Pococke, 1743: vol.2: 214). He described places of historical interest in great depth and copied down ancient, mainly Greek, inscriptions when seen. He did not provide many detailed sketches of ancient sites, and his surveys of them were done visually and recorded in descriptive form. It is not clear where his knowledge of history of the island and of sites came from, but he did often express his own personal opinion and observations about them. One important aspect of the information he recorded is the place names, many of which have been changed and forgotten since then.

Maritis was an Italian based in Cyprus in a consular position from 1766 to 1767. He wrote a description of the island based on journeys he made, as well as discussions of social, political and economic affairs (Maritis 1971). He discussed the probable sites of various cities known from Classical sources, including entering into debate over the site of Kitium, and also reported on some ancient inscriptions near Larnaca and their probable language. Although not primarily interested in antiquities, his comments reflect the level of knowledge of the period. Like Pococke, he also mentioned place names which have now disappeared.

2.2.2 The Early Nineteenth Century: Ali Bey

The next reports came from Ali Bey at the start of the nineteenth century. In the preface to his book, the publishers explained that due to personal and family reasons the author used a pseudonym (Ali Bey 1816: vol. 1: vi). Now we know that Ali Bey's real name was Don Domingo Badia-y-Ley Baich of Spain. Using his pseudonym, Don Domingo travelled to Cyprus and to other parts of the Middle East some time between the years of 1803-1807, giving full descriptive accounts of his travels. His descriptions of towns and daily life, complete with drawings and even plans of some ancient ruins with copies of inscriptions, are detailed and lively. Being a sailor himself he even gave the co-ordinates for some sites:

"Having observed the sun whilst exploring the ruins, I found my latitude to be 34 48' 4" N., and as they are situated exactly to the west of Ktima, the position of the latter remains perfectly confirmed, as well as part of Baffa" (Ali Bey 1816: vol. 1: 197).

As a final touch in some cases he gave his historical and philosophical account of the sites he visited. He wrote about castles, Arabic inscriptions on a bridge, palaces dedicated to Aphrodite, catacombs, rock cut shelters, subterranean abodes, ruins of an aqueduct, gigantic vases, monasteries and even frescos and icons. His methods of discovering sites were not scientific at all. His foreign face must have attracted locals and his questions to the locals must have resulted in them taking him to the sites: "A little village: Amanthante. A Turk and a Greek from this village aided me in my researches among the ruins" (Ali Bey 1816: vol. 1: 302). No matter what his methods were, Ali Bey's travels and published accounts of the described sites are a valuable sources of information even today.

2.2.3 The Start of Archaeological Activities: Cesnola

Half a century after Ali Bey's visit, the most infamous of all the antiquarians arrived to leave his mark on Cyprus. General Luigi Palma di Cesnola, an American of Italian origin, was sent to Cyprus in 1869 to start a diplomatic career after a military one in the Sardinian and American armies. During his service in Cyprus, 1869-1876, as American consul and as Russian consul, he dug in various parts of the island, making himself owner of one of the largest Cypriot antiquities collections ever. He claimed his work was systematic, and to prove this he published a book in 1877 called "*Cyprus, its ancient cities, tombs and temples* ", but nevertheless he has not failed to escape criticism about his unscientific work. He played devious games with the authorities of the time both to obtain permits to carry out his work, and at the end of his service in Cyprus to export 360 large cases of antiquities, of which only half actually reached America. These artefacts were the first group of Cypriot material bought by the Metropolitan Museum in New York. Later he was sent to Cyprus by the same museum for further exploration. The museum bought 10,000 objects from his collection, from which he was not to be separated for long, since he was appointed as the first director of the Metropolitan Museum. Cesnola's arrival in Cyprus in 1869 and desire to dig coincided with one of the worst droughts and locust plagues in Cyprus, that brought severe poverty to people. Taxation by the Ottomans on sheep and goat, and a royalty upon the produce of all lands were other burdens for the peasants of Cyprus; therefore the "invisible" income from tomb digging was appealing. Probably most appealing of all was the prompt money from the foreign consuls who were enjoying the adventure as if they were part of a club. These reasons directly or indirectly provoked Cypriots to get involved in digging tombs for money, which in time was to became a historical occupation.

2.2.4 Hamilton Lang and Hepworth Dixon

Sir Robert Hamilton Lang was a clerk who worked in the Middle East for a British merchant company. In 1861 his company sent him to Cyprus as their representative and a few years after that he was given the agency of the Imperial Ottoman Bank, of which he later became the manager in Larnaca. He travelled widely in Cyprus and published books. He was one of the enthusiastic antiquities collectors of the time. Hamilton Lang (1878), wrote chapters on archaeology (Ch. XV: 327), rock tombs and their contents (Ch. XVI: 340) and Ancient Coins (Ch. XII: 352). Hamilton Lang mentioned several people, mainly diplomats, who joined in buying antiques and digging tombs after the great discovery in 1868 at Dali of some pottery in perfect condition, which led to the location of tombs containing a great amount of pottery and bronze items. These finds were only the beginning of an archaeological mine:

"News of the discovery soon spread, and as the villagers were in much distress, having lost most of their crops from the ravages of locusts, they repaired in great numbers to the pottery-diggings....Pieces found might be counted by tens of thousands, and the tombs opened by thousands. The peasants of Dali attained a proficiency in tomb-finding quite extraordinary, and, unfortunately for the purchasers, became knowing in the value of the pieces". (Hamilton Lang 1878: 331-332).

Cemetery sites were easy enough to trace, especially if one tomb collapsed naturally which occasionally occurs, and tombs often contained whole artefacts. Those containing gold were even more attractive. Hamilton Lang in his book mentions purchase of a hoard of unique gold coins.

Following the explorations of tombs, various features visible above ground attracted attention, such as temples, where explorers were looking for inscriptions or hoards of treasure. It was as though gunpowder was spread everywhere waiting for the fire, and with the discovery at Dali it exploded, starting a journey that will go for many years. This was the period of going for the obvious, classical sites and the tombs. So rich were the areas they looked at that no one took a stone axe seriously.

Hamilton Lang in his book Cyprus, stated that "The origin of the earliest inhabitants of Cyprus is a question of considerable difficulty" (Hamilton Lang 1878: 3). In chapter 2 of the same book the earliest date he suggests for Cyprus is the 16th C. BC, equated with Egypt, adding that nothing before that time is known.

Hepworth Dixon in his book *British Cyprus* mentioned a house he visited:

"...Heaped in the corners lie some thousands of broken terra-cottas; vases and lamps of ancient workmanship, with gods of ancient date, and goddesses of dubious fame; all injured in the process of being dug out of a dead mans grave..." (Dixon 1879: 99).

Later he commented:

"Italians came to better purpose and with clearer hands...some of them lodging in the hamlets, where they dug into the earth for vestiges of ancient art. Many of these strangers have done well. Matie, the most successful dealer of modern times, is an Italian; Cesnola, the most successful explorer of modern times, is an Italian." (Dixon 1879: 127).

2.2.5 The Early Archaeologists: Hogarth

In 1887, some 20 years after Cesnola had arrived, a young scholar from Oxford called David George Hogarth went to Cyprus to embark on more scientific work than Cesnola had done. Hogarth's publication concerning his work in Cyprus (*Devia Cypria*) became a reference/source book for his future colleagues. In his book "*Notes of an Archaeological Survey in Cyprus in 1888* " he quite innocently mentioned parts of the island examined less systematically by archaeologists. Hogarth is one of the important personalities of this period because he used an archaeological terminology such as 'surface exploration' to describe his work. This is the first time that archaeological terms similar to those in current use were applied to antiquarian work but they had rather different meanings. His systematic examinations and surface explorations meant dividing Cyprus into theoretical/geographical areas, asking the villagers if they knew of any sites, then visiting the sites and excavating them as he went by. Hogarth even then felt that the field of archaeology in Cyprus was well worked (Hogarth 1889: vi). He therefore concentrated on the lesser explored areas of Carpass and Paphos. Like Hamilton Lang he compiled a map of Cyprus with the location of the sites known at the time. This is mainly based on re-recording the sites visible above ground with the same method of 'asking'. About 50 sites were recorded. Hogarth's importance is that he was trying to investigate, and he sought to relate his knowledge of Cyprus to a wider world of knowledge.

2.2.6 Ohnesfalsch -Richter and Myres

Max Ohnesfalsch-Richter was a German agriculturalist, natural scientist and traveller. He arrived in Cyprus in 1878 as a newspaper reporter and lived there for 12 years. Like many of his time he was soon swamped by the "plague" of antiquities. He became the first to carry out "controlled investigations" of prehistoric Cyprus at Nicosia *Ayia Paraskevi,* where he dug Bronze Age tombs. He carried out various excavations on behalf of the government and the British Museum.

In 1899 Ohnesfalsch-Richter was joined by Sir John Myres, an ancient historian who worked in Oxford University alongside scholars such as Sir Arthur Evans and was later known for his book "The Dawn of History" (1911). Together they published the catalogue of the Cyprus Museum, which contained a map of Cyprus on which all the principal sites known at the time were recorded. These sites were compiled from the provenanced artefacts in the Nicosia Museum, and the sites known through the works of the Larnaka Consular Corps.

2.2.7 Discussion

The end of the 19th century was a time of great interest in scientific excavations such as the ones carried out by Myres and Ohnefalsch-Richter. However there were hardly any field surveys - or as they would call it at the time, field exploration. In addition, there was no knowledge of the existence of the early prehistoric periods. The map published in the Catalogue of the Cyprus Museum shows only the later prehistoric sites.

Although it seems as though the early travellers and antiquarians were only interested in collecting or just simply visiting the sites of major importance, their detailed descriptions, sketches and the fact that they have published is a valuable contribution. Until the arrival of Hogarth there was hardly any change in the methods of research. Hogarth brought the usage of more scientific words such as survey, surface exploration and systematic examination, and new methods for exploration of archaeology. Although the terms he used mean totally different things today and the methods are not much different from those used by his predecessors, this marked the beginning of a new era. He divided the island into theoretical and geographical areas; and the idea and necessity of making a map and locating the sites on it was his second important innovation during this period. At the end of the 19th century, new maps with more sites were drawn as a result of Myres' and Ohnefalsch-Richter's provenancing and cataloguing work on the artefacts in the Cyprus Museum. However, to see a prehistoric site on a map, a few more decades had to pass.

2.3 1928 to 1960

The early 20th century saw the first use of field survey as a scientific tool in Cypriot archaeology, and with it came a growing awareness of the early prehistory of the island. This was consolidated by the visit of a man from a distant country, Sweden, who built the foundations of modern Cypriot archaeology and who will be remembered for his contribution for a long time to come: Einar Gjerstad.

2.3.1 Gjerstad

Gjerstad undertook his doctoral studies on Cyprus and travelled widely on the island. He made use of previous records such as the Catalogue of the Cyprus Museum and Cyprus museum survey records, and also added new sites to his list. He was also concerned with the island's geographical characteristics and the distribution of sites within the landscape.

The sites in Myres and Ohnesfalsch-Richter's Museum Catalogue were divided into two regions, the south coast and the middle of the island. The Catalogue omitted Lapithos on the North coast; Katydhata near the west coast; Enkomi; Kalopsida and Sinda near the east coast. Gjerstad quite rightly discarded the idea of sites being concentrated in a limited area, while other parts of the island were blank in archaeological remains, and reasoned that it must be due to the fact that only these two areas had been looked at. To prove that he was right, he set out to travel on a mule and find more sites. His survey method involved talking to the villagers. The fact that the sites like Lapithos were unknown to Myres and Richter inspired his idea of the existence of many other sites. Gjerstad travelled mainly in the central, northern and eastern parts of the island and around Episkopi, before he fell ill.

Gjerstad divided Cyprus into six regions (Gjerstad 1926b: 17). No explanation is given as to the rationale behind the selections and how these particular borders were chosen. However, this was a good attempt to break down the island into manageable sized units to examine. The type of work he was carrying out did not necessitate even smaller divisions which are important for intensive field work. In the present thesis the author also divided the areas of survey with arbitrary borders in a very similar way to Gjerstad and this is explained in the following chapters.

When Gjerstad was digging at Lapithos, he was approached by a workman called Bakkaliaou, whom Gjerstad was not interested in employing on site because of his bad character. Since he knew that Bakkaliaou knew a lot of sites in the area and that he was an illicit digger, Gjerstad instead sent him to be the first systematic field walker of Cypriot survey history: Gjerstad to Bakkaliaou:

" 'Get up on your donkey and ride round to all the old places you know of in the district. Collect all the potsherds you find at each place and keep the sherds from the different sites separated from each other. Bring us plenty of good sherds and you will be well rewarded' It was obvious that in this haul we would catch all the places of archaeological interest at Lapithos and its surroundings and that it would provide a quick and efficient way to examine the building history of the whole district. One of the results of lazy Bakkaliaou's donkey excursion was the discovery of the Chalcolithic settlements at Lapithos." (Gjerstad 1980a: 29).

Linking his field observations to analysis of the pottery, Gjerstad began to develop a prehistoric chronology, starting by dividing the Bronze Age into three main phases in addition to a Copper Age. His systematic approach to the Bronze Age formulated a scheme that identified an Early and a Middle Bronze Age, as well as the already well-known Late Bronze Age. He also tentatively identified a Stone Age. In 1926 Gjerstad published an article about Phrenaros-*Vounistiri* a site in Famagusta district, which he suggested might be Neolithic (Gjerstad 1926a: 54-58). This was the first time anyone ever mentioned a Neolithic period on Cyprus, and was the first major step in establishing the presence of early prehistoric sites on Cyprus. Following Gjerstad's discoveries and his excavation at Phrenaros-*Vounistiri,* the Swedish Cyprus Expedition excavated three more early prehistoric sites:

Petra tou Limniti, which proved to belong to the Aceramic Neolithic; and Lapithos and Kythrea, both of which he believed dated to the Ceramic Neolithic (Kythrea is now believed to be Chalcolithic).

2.3.2 Dikaios

Two other pioneers were to follow Gjerstad: local archaeologist Porphyrios Dikaios, and the Englishman Hector Catling. The combination of these two talents and minds was going to change the whole picture of Cypriot archaeology. Starting in 1933, Dikaios tried to survey the whole island by dividing it into three geographical areas - north, south and central. In this way he tried to establish the spread of cultures. Dikaios was the first person to realise that prehistoric sites were nearly always near the springs or rivers. He set out to test this hypothesis, with very successful results. He later found out from his survey results that the Neolithic settlements were more spread out and varied in their geographical occurrence than was previously observed by his predecessors, himself and his contemporaries (Dikaios 1935: 11). Dikaios' contributions to the development of survey methods included collecting surface material, test trenching and the aims behind the survey, which included the protection of sites and stimulation of future research.

Another giant step was taken by Dikaios with his discovery and excavation of Khirokitia, Sotira and Erimi, with which he sought to develop a firm cultural sequence and chronology for pre-Bronze Age Cyprus. The beginnings of the recognition of sites of the Neolithic period and their excavation first over-shadowed the Chalcolithic period. As more sites were excavated and the differences between them were realised, chronological series were established which placed both the Neolithic and Chalcolithic periods in their correct order.

2.3.3 Catling and the Cyprus Survey

During this period, Department of Antiquities staff carried out the first grand scale systematic surveys, especially the valuable work of the Archaeological Survey of Cyprus, (Gjerstad 1934: vol. iv, part 1a: 1), which was initiated by Hector Catling in 1955. Between the years 1951 and 1953 Hector Catling had followed Gjerstad's records and added another 40 sites to them. Between February 1955 and August 1959 Catling headed a team of staff from the Department of Antiquities to run a systematic archaeological survey of the island by means of surface exploration of the archaeological remains of all periods, from the earliest times until 1700AD (Catling 1962: 130). The archaeological survey was carried out mainly in two parts of the island. The first lies in the north, the area between Dikomo and Morphou and the coast from Kyrenia and Liveras. The second was the valley of the Yialias river between Nisou and Pyroi villages (ibid.: 130). 1500 sites were recorded, the majority of which were of the Bronze Age.

The published survey consisted of a site index, giving details of location, physical appearance, archaeological features etc. illustrated where appropriate by photographs and sherds collected from every site. In addition to all these there was a set of aerial photographs for stereoscopic examination (ibid.: 130). Catling, who followed Gjerstad's researches, also adapted his survey to a larger area by dividing each area into eleven smaller and more manageable parts, which allowed him to carry out more intense surveys in smaller areas (ibid.: 134). Catling's field observations about the settlement distributions and the importance of some topographical characteristics for the choice of settlements are still valid. Quite rightly he believed in the importance of perennial springs as an attractive element for the choice of settlement site from the earlier times to the later periods to come. He also noticed that at sites like Kythrea, Lapithos, Kirni and Dhikomo the Neolithic settlement sites were succeeded by Bronze Age and later occupation, with the actual settlement areas shifting slightly rather than being superimposed one upon another (ibid.: 131-132).

Despite the gradual development of systematic survey on Cyprus, both methodological and practical problems remained. Discovery of sites was still skewed towards easy to find cemeteries, and settlements of the Late Bronze Age and Classical periods. Catling explained that this was due to the recognition of the surface material. He also admitted that the survey was confined to regions that were promising, giving uneven coverage, although a number of sites discovered came from the least expected areas. For the Neolithic period, he mentions the discovery of 100 occupational sites with a distinct distribution differing from that of other periods (ibid.: 137). Catling's publication (ibid.), with a list of site names and co-ordinates as well as maps, is still invaluable. In contrast, some surveys were not published at all: Last's 1946 survey of the Akamas peninsula, Nicolaou's 1960 survey of Polis tis Chrysochous area and Loulloupis' survey of the Lara area in the late 1960s in connection with tourist development (Hadjisavvas 1977: 222).

2.3.4 Discussion

The period 1928-1960 saw major advances in the development of survey methods, the most important being the island-wide approach to survey achieved by dividing it into smaller specific geographical areas; having a survey team dedicated to this work; recording of the sites on Cadastral and other relevant maps with a list of reference numbers and locality names; and collecting samples of finds from the surface. The use of survey for assessing areas before development was also an important innovation. The importance of Catling's work lay in it's recognition of the importance of having knowledge of the archaeological landscape, both for cultural heritage management and research purposes, as his 1962 publication shows. Excavation of important Neolithic sites and recognition of the Chalcolithic period, created a cultural sequence and relative chronology for the prehistoric period. The methods of survey however were not much changed; now archaeologists did not rely solely on local information but sought to verify sites for themselves and check their samples of diagnostic cultural material. The fact that teams were set up to carry out extensive survey was a major development in the history of survey in Cyprus. Today their results are used as the basis of any survey project. The survey results, which list many sites and the material collected, provide a good reference collection for later scholars.

2.4 1960 to 1974

After independence in 1960 surveying in Cyprus continued using more or less the same methods of the previous decade but with lower priority and less speed. In the 1970s, Europe was witnessing changes in archaeology, and was becoming more "field" oriented. This brought with it important developments in the practice of field archaeology and inevitably attracted teams of foreigners to Cyprus as well to do significant archaeological work. Some of these teams, especially those led by Watkins and Peltenburg, were there primarily to excavate, but they also carried out surveys in the areas around their excavations to put the sites in context. These surveys were done very unsystematically. Stanley Price and Symeonoglu carried out surveys on known sites or areas around the island, but Stanley Price's methods and aims for the survey were very different from those of other surveyors. He was more concerned with the analysis of site distributions than with active survey on sites or finding new ones, aiming to follow up recorded sites and upgrade them with his observations which he later published as a gazetteer. The new strategies for surveying archaeological sites were: to have a theme or aim for the survey; introducing site questionnaires and computerisation; surveying areas and periods previously unknown; consideration of elevation for settlement choice; topographical mapping of the sites and the area; studying the distribution patterns of settlement within an area for comparison with other areas similarly surveyed; and examining intra-site variability of surface artefacts.

2.4.1 Symeonoglu's Phlamoudhi Survey

The significant feature of the Colombia University Expedition at Phlamoudhi is the specific question that the survey aimed to explore and the manageable size of survey area that was explored fully. Symeonoglou's team surveyed an area measuring 3 miles by 3 1/4 miles within which they were hoping to discover a Bronze Age settlement that they had failed to find at Vounari (Symeonoglou 1972: 187). Within the survey area, Symeonoglou and his team relocated all the sites except some small cemeteries previously recorded by Catling. There is no mention in his publications of whether they walked the whole of the area of 3 x 3 1/4 miles or just tiptoed between the sites. He had six people on each site collecting surface material; building material was recorded as well as density of pottery on site. The sites were photographed, marked on topographical land survey maps of 1:2500 scale and then transferred to 1:25,000 maps, and were described in writing. In short, Catling's method was used to relocate the sites, and his method of recording was used on a much reduced scale. The motive for surveying in smaller areas or manageable areas was to produce an area assessment of settlement patterns, and this idea was followed by many surveyors of the time. This was only possible because numerous sites had been discovered by the Cyprus Survey.

2.4.2 Adovasio's Khrysokhou Survey

In 1972 Adovasio set up a new area survey programme, in one of the archaeologically least known areas, the Khrysokhou drainage at the south west tip of the island. He was mainly interested in the settlement patterns of both prehistoric and historic periods, and the identification of Neolithic and pre-Neolithic artefacts. The banks on either side of the river were surveyed, and the artefacts found were compared with artefacts from the Cyprus Museum collections. In this way a chronology was set for the Khrysokhou drainage region. A small simple database was set up for recording the survey, which included information about the elevation of the settlement sites as well as water sources. The area was surveyed extensively and 223 sites were discovered. The problem with Adovasio's survey is that he recorded the Neolithic and the Chalcolithic periods without distinction and it is difficult to differentiate from his figures of maps and diagrams which is which. His most important contribution to survey and archaeology in Cyprus was his construction of a survey map which he used to investigate long-term settlement patterns - an advance on Catling's 1962 publication.

2.4.3 Stanley Price

The Analiondas Region Survey by Stanley Price in 1972 brought a different aspect to surveying in Cyprus. His field method was random sample squares investigated for evidence of occupation. Stanley Price's work was based on the intensive investigation of a series of random 5km squares. It was an attempt at applying a real sampling strategy in the manner of the scientific and vigorous "new archaeologies" of the 1970's. He not only emphasised the importance of systematic intensive survey, but also discussed reasons for the unequal discovery/distribution of the sites and the importance of reliable surveys ahead of construction work. He suggested that development/construction may have destroyed sites, and may therefore explain the lack of results in some surveyed areas. He also interpreted his surface finds from a different perspective than merely putting his results down in chronological order. He noticed a possible problem with *dhoukani* flints that could resemble Neolithic chipped tools, demonstrating that survey material should be treated with caution. He discovered that there were duplications in records, and eliminated them; during his field work he sometimes found previously unknown sites. The short but detailed accounts of the sites surveyed since 1935 by the Cyprus Survey, Dikaios, Catling and others up to 1978 were all recorded as a gazetteer (Stanley-Price 1979a). The sites were divided into districts, relocated and recorded in alphabetical order with the locality names. His information includes elevation, map references for both Cadastral and other maps, publications, the artefacts and his observations (ibid.: 85-90). In the light of limited surface collection of finds on some sites, he confirmed or added new comments to the previous knowledge. Within a very short time during 1971 and 1972, at different seasons, sometimes making more than one visit to the same site, he visited sites all over the island. Later all the sites were re-assessed and analysed to establish settlement patterns in Cyprus. His invaluable gazetteer became the source book for the archaeological surveyor in Cyprus, especially for archaeologists such as myself who have no access to the records of the Department of Antiquities and the Cyprus Museum, and it is one of the two main sources of information used for the survey reported in this thesis. Stanley Price is also one of the first people who gave references to the Cadastral survey, locality name and the field number.

2.4.4 Watkins' and Morrison's Kataliondas Survey

The Kataliondas-*Kourvellos* survey used a very different method altogether and it was a one-site survey. This was one of the first sites in Cyprus to be surveyed systematically, and it was one of the first surveys of its kind in Cyprus that was planned and carried out to assess the site from surface scatters to gain the maximum information possible without excavation. This required very carefully planned, intensive systematic survey, and the system used by Watkins and Morrison in 1972 was that most commonly practiced for systematic survey in Britain, especially in the 1980s. The team consisted of five people who worked on the site for three weeks during the spring season, and involved a geographer as well as an archaeologist. Having a geographer who could assess the geomorphology of the past environment and the changes on the landscape since the site's occupation meant better assessment of the distribution of the surface scatter and the site formation processes. The area covered during the survey was 15 hectares. Aerial photos were used, and a statistical approach was taken to the material collected. The west area was divided into 20 metre squares, from all of which material was collected, whereas the south area had a 20 metre square checkerboard transect. Each square was walked by more than one walker and the area was walked from two different directions (Watkins, 1979:14). Here Watkins was experimenting with reducing personal biases in collecting artefacts. In other words, it made his survey and each grid balanced. Artefacts were cleaned, sorted and counted, and a representative sample was drawn and photographed. The method of systematic surface collection applied at Kataliondas -*Kourvellos* helped to identify the artefact densities which may be interpreted as occupation or work/functional/activity areas. It is unfortunate that many archaeologists in Cyprus did not use this pioneering method until the nineties. This survey method was designed with vision which was not appreciated at the time as with many other famous inventions. It sets the bases for the present author's survey methodology, after examining many survey methods used in the Mediterranean and the Near East.

2.4.5 Peltenburg's Kyrenia Survey

In 1973 during the excavations at the Late Neolithic site of Ayios Epiktitos-*Vrysi* directed by Peltenburg for Glasgow University, an associated survey was initiated in the Kyrenia district. It had two main aims: re-surveying sites previously known from surface material, and an area survey of the Vasilia-Kormakiti region previously surveyed by Catling (Peltenburg 1985a: 92-114). The system of field walking involved a line of walkers spread at regular intervals walking at the same pace in the same direction within field boundaries (Alison South, pers. comm.). All finds were put into a paper bag and marked with the locality name and the plot number from the Cadastral survey. In this way, an exact field location was recorded for the finds. The sites that were investigated were: Ayios Epiktitos-*Kelali* (not located by Peltenburg's team), Ayios Epiktitos-*Mezarlik*, Ayios Epiktitos-*Xylomandra*, Bellapais-*Vasiliki*, Karavas-*Yrisma,* Karmi-*Fountzi,* Orga-*Palialona/Ambelia* and Klepini-*Troulli* (Peltenburg 1985a: 100-101). Peltenburg was interested in the development and traditions of the pottery motif styles and by using this, to place the known sites in a better chronological order, filling in the gaps that were present in Cypriot prehistory. However, as he wrote in the foreword to his publication of Ayios Epiktitos-*Vrysi,* "The intended fifth season of excavations at Ayios Epiktitos Vrysi in 1974 began inauspiciously with the greeting 'We have a revolution'! Indeed it and the study season planned for 1975 never took place." (Peltenburg, 1982:xxii). Following this interruption, the project was discontinued and Peltenburg did not study the survey or excavation material in detail to complete statistics and identifications.

2.5 1975 to 1996

Following the division of the island in 1974, the geographical location of surveys moved to the south, and as a response to the huge growth in tourism development, survey became more important. In 1976 several foreign projects were established to carry out long-term archaeological work in the island. These projects covered large areas and aimed to carry out multi-disciplinary work, survey, excavation and the study of the material that was produced. The best known of these projects are the Lemba Archaeological Project (henceforth L.A.P.) in the south-west of Cyprus directed by Peltenburg, initially for Glasgow, later for Edinburgh University; and the

Vasilikos Valley Project (henceforth V.V.P.) in the south, directed by Todd and South.

2.5.1 Hadjisavvas's Paphos Survey

In the winter of 1975, Hadjisavvas undertook an archaeological survey within the Paphos district, in an area (Khlorakas, Lemba, Kissonerga, Souskiou) which was threatened by a Land Consolidation Programme. His survey located 33 sites of the prehistoric (mainly Chalcolithic) to Medieval periods, most of them previously unknown. There are no records of his survey method and the team was very small, just three people (Hadjisavvas 1977: 222). Nevertheless, his brief description of the sites' locations and surface finds as well as Cadastral map references are a helpful resource. Since these sites were under threat, the fastest information recovery could not have been accomplished by excavation, but by survey. Although it is not mentioned in his survey report, it can be assumed that the survey was used for establishing the location of the sites for cultural heritage management purposes.

2.5.2 The Lemba Archaeological Project

The L.A.P. survey areas were chosen for intensive survey within different ecological zones. The aim of the survey was to relocate the sites in each zone, to set up a sequence, and to compare them with the known prehistoric C14 dates from one area. After assessing the survey results, a site would be selected for excavation in order to fill some of the gaps in knowledge of western Cyprus as well as Cypriot prehistory in general. Other surveys were carried out by this project alongside excavations. The first one was in 1979, covering part of the Stavros tis Psokas valley, overlapping with Adavasio's 1974/5 Khrysokhou region survey (Sheen 1981: 39-42). The area covered by the survey was just over five square miles, surveyed by a team of four in eighteen days. A total of twelve sites and findspots were discovered, six of them known previously from Adovasio. The survey was undertaken in two stages: the first was to locate the sites, and the second was to re-visit them for surface collection. All sites were recorded on Cadastral map sheets and all the fields were walked and examined for archaeological traces. The second survey within the L.A.P. project was in the Dhrousha area (Baird 1984: 63-65). The survey method chosen was compatible with the previous surveys, to allow comparison of the data. In 30 working days c.800 hectares of land were covered by intensive systematic survey. The area was within and around the villages of Inia, Dhrousha, Terra and Kato Arodhes, and eight archaeological sites were recorded. The method of surveying was similar to that of the 1973 survey at Ayios Epiktitos-*Mezarlik.* Each Cadastral plot was walked by a team varying from two to five people in size. Large plots were walked in a series of transects. The survey in Peyia village in 1983 was carried out in the same way with the same principal aim (Baird 1985: 340-349). However, the Stavros tis Psokas survey method was different: a strip of 100m wide was surveyed on the banks of the river, supplemented by three wide transects between 350 to 750m long (Baird 1987: 15-18). This was a rescue survey and the methodology is the same as for the others. However he did not describe such transects in his previous surveys (Baird 1984, 1985 and 1987.); on the contrary he spoke of systematic cover of all plots.

One other survey carried out by L.A.P. was on the site of Kissonerga-*Mylouthkia.* Prior to excavation the site was surveyed for an assessment of the excavation location, and more importantly, the survey tried to establish lateral settlement drift within the site (Peltenburg 1981: 31). The publications so far do not give any detailed information about the survey methodology and results. The objective of the survey carried out at Kissonerga-*Mylouthkia* is the closest to my own survey, except that the excavation has qualified and extended the survey information.

2.5.3 The Vasilikos Valley Project

The V.V.P. was initiated in 1976 by Todd and South, with the aims of determining the human-land relationship from the earliest settlements of the valley in the Aceramic period to the Late Bronze Age; and studying the settlement system of these periods all the way to the Medieval period (Todd 1987: 1). The project research was in three parts: survey, excavation and specialist studies. The survey methodology was to set out 100m-wide transects aligned east-west across the valley at 500m intervals (Todd 1989: 41). Due to the speed of land consolidation work in the valley, the priority was to find sites and collect representative artefacts from the surface for future reference. Besides rescue survey, which seems to be the main reason for the establishment of many surveys, V.V.P. also used surface survey at Kalavasos-*Tenta* for establishing the extent of the site and to distinguish occupation densities of the site at different periods, (Aceramic Neolithic and Ceramic Neolithic) (Hordynsky 1987: 17). The site was divided into 10m squares, and a team of eight people collected all the surface material in each square. The analysis of the surface scatter on the site helped the excavators to determine where to establish the excavation trenches. This is another important example which is close in methodology to my survey; perhaps the only difference is that the choice of grid sizes for my survey was 5 metre squares.

2.5.4 Sotira-Khaminoudhia and the Kent State University Surveys

Besides the major survey projects already mentioned, some small-scale site surveys were initiated, mainly carried out as short one-off surveys accompanying an excavation. By this means, the excavators aimed to find other sites relevant to their study. One such survey was carried out in 1983-84 by Held at Sotira -*Kaminoudhia* (SKS) (Held 1988: 53-62). The method of survey was not described. In 1978 Kent State University (KSU) carried out a 4 week non-systematic, extensive survey between the Kouris and Evdimou valleys, and around the tomb group at *Kaminoudhia* targetting Bronze Age sites. The publication so far does not give information about the methodology (Held 1988: 53-62).

The Episkopi region archaeological survey directed by Stuart Swiny for Kent State University (KSU) aimed specifically at Middle Cypriot and Late Cypriot IA periods to discover whether these settlements were part of typical communities (Swiny 1981: 51). The sites were located by studying the records of the Cyprus Museum and Cyprus Survey, including the part published by Catling; consulting with Department of Antiquities staff; and talking to local people. 18 sites or loci were recognised (ibid.: 55). The survey was carried out with six people who were familiar with the materials of the Early and Middle Cypriot periods. The extent of each site was established by team members walking and collecting 4m apart from each other, and plots or artificial sub-plots were then surveyed. The survey included recording architectural features, collecting artefacts and mapping artefact scatters (ibid.: 57). The artefacts were counted, recorded and stored plot by plot, then analysed for indication of chronology and functional divisions within the site (ibid.: 58). The director's contact with the local people, who were familiar with the land and the changes made, proved to be very useful. The survey methodology was very similar to that carried out by Watkins and Morrison nearly a decade earlier at Kataliondas-*Kourvellos*. The methodology of the Episkopi survey is closest to my survey; however, I am not in the position to compare the functional divisions within the site because the results of the Episkopi survey are not yet available.

2.5.5 The Akhera Survey

The survey of the Akhera area in 1979 was oriented to problem-solving. The problems concerned Late Bronze Age mining, trade routes and how the period ended (Wallace 1982: 238). In order to answer these problems, sites related to mining activity covering a 10km square around the village of Meniko were surveyed. Each square kilometre was divided into 500m quadrats, and was walked entirely (Wallace 1982: 239). Three sets of maps were used, one of which was specifically mining related 1:2500 scale maps. The assessment of the survey results was that there were no other settlement sites contemporary with Akhera; nor were there other, smaller sites of any other period. The survey concluded that this was due to the lack of natural resources, especially water.

2.5.6 The Canadian Palaipaphos Survey Project

Also in 1979 a large-scale multi-disciplinary project called the Canadian Palaipaphos Survey Project (C.P.S.P.) was established, directed by Rupp. This extensive archaeological survey was based on a stratified random sampling strategy (Rupp et al. 1984: 133). The work began in the Ezousas, Xeros, Dhiarizos and Khapotami river drainages and the adjacent Paphos coastal plain (Rupp 1987a). The first season's survey covered areas specifically selected according to water sources, prominent landforms, and arable land. Two survey teams of 5-6 people walked transects. 23 new sites were identified (Rupp 1981: 252-3). In 1980 the survey's emphasis changed to human occupation and exploitation of the survey area, gathering information on the physical environment, copper industry and chert sources (Rupp 1984: 134). As the survey progressed, the aims changed from identifying sites of all periods, to very specific specialised, focussed researches of settlement and resource exploitations. Some specific studies which were covered are clay sourcing and local pottery production centres; chipped stone industries, chert sources, and use wear analysis; copper mining and smelting; and ethnoarchaeological work. The surveyed sites were inventoried in a database for all archaeological and historical periods. The database included geological, petrological, soils and other geomorphological information. The survey not only studied the settlement site distribution pattern but also the factors affecting the sites and the areas. The area surveyed was about 665 square km (Rupp 1986: 28). A surprising emphasis is given in discussion of the methodology to the time spent in the field. CPSP used a 1 square km sampling quadrat, randomly chosen within the boundaries of the survey area. Each kilometre square was covered by means of two 100m wide transects running west-east or north-south. Artefact collection from the surface was limited to time allocation grab sampling of 5 to 25 sherds within a controlled time frame. The sites were then recorded on 1:5000 scale topographical maps (Rupp 1986: 30). In 1986 the project was completed, but publication of the main volume of results is still awaited. In 1991-1992, the CPSP project was re-established to continue the extensive survey in the Dhiarizos drainage locating early prehistoric sites for controlled surface collection. The aims of this extention of the survey were to determine the limits of the surface scatters and the areas of higher densities of the sites, to date the occupational phases, and to select one of the prehistoric sites for interdisciplinary excavation (Rupp 1993b: 160). The method of surface collection was to place 2 x 2m squares at 10m intervals stretching over 50-100m on large sites, 5m intervals on smaller sites, with crossing transects intersecting at the areas with high artefact densities (Rupp 1992: 286-288). In 1992 CPSP was replaced by the Western Cyprus Project (WCP). This aimed to continue the survey work of the CPSP in order to fill in gaps in the earlier survey; to carry out controlled surface collections from early prehistoric sites; and to excavate test trenches at Ayios Savvas, a Middle Chalcolithic site. Four teams with five members each surveyed unit sizes ranging from 650 x 1000m to 500 x 500m. The survey method and the controlled surface collection was the same as that of the 1991 CPSP (Rupp 1993b: 162).

The ideas of this project are good yet over ambitious and the real aims get lost in a large 'multi-disciplinary' project. There seem to be inconsistencies, for instance, the season dates are different in different publications, which is confusing to a reader. The objectives are equally inconsistent and it is not clear if they are yearly aims or aims for the particular area or research. This inconsistency and confusion is probably due to several things: the recognition of the survey's limitations in producing answers to sets of queries; "surveyors syndrome" - asking too much from the original survey method and getting diverted from the main aims; and over ambitious project plans.

2.5.7 The Marki Regional Survey

The Marki regional survey of the Alykos River began in 1990 under the direction of Frankel and Webb. The area of survey initially started from Marki area to Kotsiatis village in the south-east and Analiondas village in the south-west. A team of four walked independently, criss-crossing the fields. This "intensive non-judgemental survey" proved to be effective. Some sites already known were relocated independently, and diagnostic sherds were collected for detailed study. The aim of the survey was to investigate the existence of any other Bronze Age settlements or copper working within the same area that may correlate with the site of Marki-*Alonia* being excavated by the same project (Frankel and Webb. 1991b: 1-16).

2.5.8 The Maroni Valley Project

In 1991 an extensive and intensive survey was initiated as part of the Maroni Valley Project (MVASP). The survey had three aims: the systematic study of human settlement and use of the valley through time; to define a broad regional setting against which to analyse the data produced during the important excavations at Maroni-*Vournes*; and to record the valley's archaeological history before its destruction through recent agricultural methods and rapidly growing construction (Manning and Cornwell 1992: 272). The survey method combined extensive survey and extremely intensive survey of smaller areas within the limits of the extensive survey. Promising areas of survey were subject to total collection in which a transect would be divided into a smaller sections. The description of the survey method is unclear in parts and the project seems to lack clear detailed objectives.

2.5.9 The Sydney Cyprus Survey Project

The Sydney Cyprus Survey Project (SCSP) in 1992 aimed to examine the location and the hierarchy of settlements through time with special reference to their connection with metallurgical and agricultural resources (Knapp et al.1992: 319). There were two survey recording methods that could be used according to the field conditions. The first one was by means of Geographical Positioning Systems, which was used for controlling the alignment of the 100m-wide transects within one hectare quadrats. These transects were walked by team members spaced out 5m from each other. The second method was plot recording. The danger of this kind of survey is that surveyors cannot tell how much of the site they are missing out. Also the theories they develop are affected by sample bias. In addition the project publications describe the survey methodology and the objectives in an unnecessarily complicated way.

2.6 Conclusions

An interest in the antiquities of Cyprus was displayed by Western travellers visiting the island while it was part of the Ottoman Empire, and their written accounts inspired later antiquarians to visit Cyprus to carry out explorations, in particular during the early part of the British Mandate period when restrictions on the excavation of burials enforced under the Ottomans were lifted. It is quite clear from the accounts of these early scholars that they were blinded by the classical education they had received, and they could see no further back. Their education led them to go on exploration expeditions to the Near East and the Aegean in search of classical origins and Biblical sites (see for instance Bernal 1994: 119-128). One person's great discovery led others to search for similar things.

Most of the "archaeologists" active in Cyprus and all around the Mediterranean during this early period, if trained at all, were trained in classical archaeology. This made many of them concentrate on two major topics: classical art history (the study of major monuments of sculpture and architecture); and ancient history, where the emphasis has been on the study of ancient texts. Archaeologically this has meant a concentration on the discovery and excavation of major sites likely to produce important works of art, and Cyprus was no exception to the rest of the Near East. At this period in Europe and North America, the idea of systematic and scientific investigation of prehistory was still at an early stage of development. In particular, in terms of field techniques, this is the age of General Pitt Rivers in England, Petrie in Egypt and Palestine and the controversial Schliemann at Troy.

Gjerstad, himself a classical scholar, introduced the idea of prehistory in Cyprus and carried out the first systematic and problem-oriented surveys, but archaeological survey in Cyprus only really began to take shape from 1935, when Dikaios initiated proper surveys. Catling's islandwide systematic survey developed into a mission of the Cyprus Survey rather than an archaeological task. In the 1960s, the Land Development Programme on the island for building roads, dams and laying pipes threatened many areas of possible archaeological interest. Especially from the mid 1970s the threat of the above-mentioned programme called for urgent survey in the areas that had not previously been investigated. The survey methodology of this period was unsystematic, simple but efficient. The results of these surveys formed the basis of the invaluable sites and monuments record for Cyprus.

In the 1980s and 1990s survey projects became very popular for many reasons, one of which is the smaller financial demands in comparison to excavation. Also the variety and variability of the questions that surveys could answer in a shorter term than excavations and over a larger area increased the number of survey projects in Cyprus. However, when it comes to relating all the projects to my own survey methodologies and objectives my comparison work is disabled by insufficient description and publication of survey methodologies. As criticised above, some project publications only mention that they did survey but do not describe the actual physical way of doing it. For example, Stager writes that there were three approaches to the project: survey, excavation and area studies (Stager, 1989:1) but unfortunately does not go any further than mentioning the survey in his introduction and a map on page three of the same publication. This would be my general criticism for all the projects of the 1980s and 1990s. The titles of the projects carry the word survey yet they are not improving the methods of survey but only their objectives. There is also no clear indication and explanation of step by step survey method - it sounds as though it is taken for granted that everyone knows how it is carried out; it is regarded as too simple and therefore unimportant to describe in detail; or methods change each season and therefore the method of survey is not explained. Objectives should determine methodology, but it sometimes seems as though being different from other projects has taken priority over structured methodology and clear objectives, with the result that in this very small country there is little consensus or common ground to enable scholars to carry out comparative studies.

The survey methods and recording systems developed from simple efficient survey techniques in the early 1970s, which aimed simply to record sites and monuments, into multi-disciplinary, complicated, problem solving, modern systems. The latter, however, were still based on the fundamentals of survey. The use of Geographical Information Systems and Global Positioning Systems has not eliminated basic recording. The maps used, and systematic collecting and marking of artefacts, have stayed the same; the amount and where to collect, and the size of survey areas have changed. Is there such a thing as a "best" way of surveying, or do all the methods lead to the same conclusion? The answer is related partially, if not largely, to the finances and the availability of human resources. Since surveys, if carried out properly, can tell us a lot, perhaps we should establish minimum standards for the survey projects to come.

Chapter 3

Research Design and Methodology

3.1 Introduction

Survey methods are used for answering many and varied questions in the field of archaeology. There are still debates as to how reliable surveys are, and which method is more useful. The answers come down to personal choice according to the aims of different projects. In this chapter the methods and equipment used for my survey project are explained in detail.

3.2 The Aims of the Survey

The main aims of the survey were :

1 - to re-investigate the sites previously recorded during various survey projects, e.g. the Cyprus Survey and Stanley Price's survey, in the light of information from recently excavated sites in southern and western Cyprus such as Lemba-*Lakkous*, Kissonerga-*Mosphilia*, Kissonerga-*Mylouthkia*, Kalavasos-*Ayious* and Kalavasos-*Tenta*, in order to improve our knowledge of the sites in the north.

2 - further definition of the chronology of the sites and their phases in the north. This would be made possible by comparing the diagnostic sherds and other artefacts from the survey with those that have archaeological contexts and a secure chronology.

3 - to investigate whether the prehistoric cultures of Cyprus showed homogeneity in their cultural development. This would be done concurrently with aim number 1, by comparing the cultural materials as well as raw materials.

4 - to attempt to find indications of multi-period and shifting and drifting settlement sites by means of intensive systematic total surface collection and analysis of the artefact scatters in terms of variations in relative density of artefacts.

A survey method was needed that would take into account the above-mentioned points as well as be achievable within the finances, availability of staff and time allocated for the research. It was also necessary to establish a reliable system for data collection, compatible with other surveys carried out in the island, for unbiased comparison and analysis. Yet improvement on the methods already used on the island and adoption of other techniques and methods from the Mediterranean was felt necessary. This was due to the aim of re-assessing the previously known sites, requiring maximum possible data acquisition from the surface which could answer the questions raised. The documentation and storage of the artefacts, site coding etc. was not only intended to produce a reasonable basis for a thesis for the writer, but also to provide a foundation for future researchers to work with and to present a collection of artefacts for future archaeological studies on Cyprus.

3.3 Survey Methods and Techniques

In 1995 and 1996 survey was initiated primarily within the Kyrenia district. The district extends from the border of Akdeniz (Ayia Irini) village in the west to the borders of Kucuk Erenkoy at the base of the Karpas peninsula, along the north east coast and to the southern skirts of the Kyrenia range including the small villages on the skirts of the mountains. However, the importance of investigating coastal settlement sites, chance finds and method of choosing sites for survey obliged me not to stick within any artificial modern geographical borders but to design new borders according to the distribution and accumulation of certain settlements and periods of already recorded sites.

As it was not possible to cover such a large area intensively with the time and resources available, intensive survey was focused on specific sites in a number of areas. These were:

1 - Vasilia village area, from the foothills (and hills) of the Kyrenia mountains to a kilometre inland from the sea.

2 - East coast settlements, a chain of coastal sites perched on the cliffs by the sea.

3 - Hillside settlements on the southern skirts of the Kyrenia mountains.

4 - Lowland and highland settlements on the northern face of the Kyrenia mountains.

3.4 Site Formation and the Selection of Sites for Survey

Surface scatters present problems. According to Bintliff, a Bronze Age farm in Greece can be represented by just a few sherds on the surface (pers. comm.). Likewise some sites may be totally buried under the ground and there is no sign on the surface of what might be beneath, while others may have been eroded away. There are certain activities on land such as ploughing, removal and deposition of soil, and alteration of land surfaces for a variety of reasons, which can affect site formation processes adversely, and may confuse the surveyor. These have been observed during the present survey, and therefore in some sites surface data has been treated carefully. Ploughing was an issue at GKB 96, where half the site had been ploughed recently (see section 7.36). Interestingly, this did not seem to have a major effect on data collection. Visibility of artefacts was in fact slightly better in the non-ploughed section, the reverse of what would be expected. However, on some sites large stone artefacts, particularly querns and similar items, are often removed by land owners for clearance reasons and to make ploughing easier. The stone artefacts usually find themselves at the edges of the fields or in terrace walls. This is not always negative, as the presence of querns in walls can alert a surveyor to the presence of a site. Removal of soil was noted at TKY 96, near which a dam had been constructed (visible in plate 4a), with the result that the south-western part of the site was damaged. There was little surface scatter in this area, and it was not gridded, as it would have presented an incorrect picture of the original state of the site (see section 6.8.2). Deposition of soil also occurs - not only in projects such as dam construction, but also the importation of fertile soil for greenhouses on the north east coast, and dumping of soil from various excavations, including archaeological ones, which can cause confusion. This is common during road building programmes, when materials such as pebbles are brought from river beds and might appear to be raw materials imported to an archaeological site; and on construction sites, where land may be levelled. Neither of these activities appears to have affected the sites surveyed for this project, although levelling of land is currently in progress below BVS 96. Terracing for cultivation or reforestation is common in Cyprus. This can result in movement of artefacts, and the exposure of previously buried sites, especially when modern machinery is used. EDT 95 has been exposed due to terracing and it was unclear during survey whether the material was washing out of the terrace section or was in situ (see section 5.4.19). Erosion can also be speeded up by these activities, although in the long run it is slowed by forestation and terracing. Severe erosion caused by winter floods can move archaeological material some distance, but it should still be possible to recognise the source, and to distinguish this type of deposition from that of shifting and drifting settlements. If doubts remain, it is wise to visit the site more than once, at different times of year.

All these activities and potential pitfalls must be borne in mind when carrying out a survey. It is important to research the history of the area carefully, and to get local information about land use and landscape history, in order to minimise mistakes. A soil map should be at hand to check the soil types if in doubt or if there is a difference between a very localised soil type and its surrounding area. For all these reasons, certain types of surface scatter should be treated cautiously.

Stanley Price 1979 is a gazetteer, that lists the sites and the artefacts found by the various works carried out on site. There are also his observations, on the number and variety of artefacts. The sites chosen for my survey were selected from Stanley Price's gazetteer.

The first aim was to select sites of the Chalcolithic and Neolithic periods. This was not always easy since the accuracy of the estimated periods could have been doubtful. Therefore other criteria were drawn up: first, to pick areas and sites that have recently been under debate; second, to be within the responsibility of the Kyrenia District Offices (for permit reasons); thirdly, to have a secure record of the location and reasonable access; and finally to have a record of sufficient artefact scatter. Sites distinguished solely by a purchased axe or a few sherds were eliminated, as it could have been waste of time trying to locate these sites. Some sites were visited and no or very few artefacts were found. Some sites were extremely overgrown, creating poor visibility of the ground.

3.5 Site Extent and Site Visibility.

The extent of a site was determined by walking in all directions from an estimated centre point on the site until artefact scatters diminished to nothing. This edge was marked by a flag pin. This system was continued all around, establishing a boundary for the site. In many cases, for simplicity, the archaeological boundary was extended to a natural boundary such as the edge of the field or terrace. From the edges of the gridded "site" an extensive systematic walking of a mile or so away from the site was continued. This extensive survey always covered at least one complete sheet of the Cadastral map. In cases where visibility and access to the fields made it possible, extensive survey continued further. When more than one site was known in the area, the land between these sites was field-walked in order to search for artefact spreads and other possible sites in between the known sites. This was also important for establishing whether these were different sites resulting from drifting and shifting or were part of the same site with extensive spread of artefact scatters. This would be examined by: intensive surface collection; analysis of the artefact densities in the field; comparison of the data from these fields; and also studying the topographical preference of the site locations.

The visibility of the ground surface was determined by the current land use. The olive and citrus orchards are usually kept clean and the soil beneath the trees is tilled, providing clear visibility for survey. Other easily surveyed lands are the ones used for agriculture, preferably after the harvest season and particularly after being ploughed. Land that was unused or abandoned was usually covered with thistles which made the surface investigation tiresome and in many cases painful. Walking sticks were used when neccessary to lift up the lower branches of the thorn bushes for investigation. The worst kind of vegetation that provided no visibility on land was the small bushes of maquis cover. However, this kind of vegetation was all burnt during the large scale fire during the 1995 survey season, creating a mixed blessing from the survey point of view. On the one hand, vegetation was cleared away and access and recognition of difficult landscape was clearer; on the other hand, it made everything black. This last point was experienced at two sites: first was the site of *Phunji* (*Kusluca),* where the site was easily recognised due to the clearance of the forest but only a few sherds were found which confirmed the site; second was the area survey west of Vasilia village, where fire cleared the bushes and exposed the well-known tomb site of *Evrima* and others further in the mountains recorded during the Cyprus Survey.

3.6 Team size

More important than having sufficient or plenty of hands to help was the need to train the team members to see artefacts on the ground, to notice what they were looking at, and to collect the right things. The second purpose of training was to ensure a common standard of collecting practice. The first two weeks of each survey season were slow due to the training required. Once students gained enough experience in recognising surface artefacts, surveying went faster. Due to the small sizes of fields, especially in the northern skirts of the Kyrenia mountains where land is divided up for small orchards rather than large fields for agriculture, it was best when the team comprised not more than five people: more proved to be uneconomical, extra members being under-employed. For total collection, which involved more varied tasks, eight people on the field was the most efficient and fastest way to survey.

3.7 Data Collection and Sample Size

How much, and what to collect is one of the biggest debates in surface surveys. As always, this also depends on time and finances, space and the questions surveyors wish to tackle. Collecting worn artefacts that are hardly identifiable may be nothing but a waste of time and effort; however, it could be argued that even these worn unrepresentative items could be used for weight analysis. On the other hand, how could one tell what period they belong to? What information would mass artefact weight of all periods give? Because of this, I decided to collect only clear artefacts. This included pottery, except the crumbly minute pieces, chipped stone, ground stone and similar.

Any possible items, particularly possible ground stone, that could not be easily identified as artefacts rather than natural occurrences were left on site for other archaeologists in the future who may be able to tell what they are. A record was made specifically of one type of unworked stone, axe shaped pebbles which I suspect were collected specifically for making axes. This will be discussed later in chapter 3 in depth.

Clearly the size of any sample affects what inferences can be drawn from it. There are two types of sample size relevant to this project - the total amount of material collected from any one site, and the number of items in each artefact category used for the creation of distribution diagrams. Taking these into account, sites were only chosen for re-investigation from Stanley Price's gazetteer if sufficient artefacts were likely to make the site both rediscoverable, and suitable for distribution analysis. Sites known only from the presence of a few artefacts were ignored (see section 3.4). However, even with a small total sample, it is possible to make some inferences. Thus dating was possible at DCD 96 (section 7.5.7), despite the low number of artefacts, because of the quality and type of items found; at Karsiyaka dating was more problematic but sometimes possible (section 5.5.15); understanding the drifting and shifting of settlements is also much more difficult, as shown at Mezarlik (section 5.3.38), while at Karsiyaka the very low density of artefacts over a wide area makes it difficult to determine site boundaries (section 5.5.15). Other questions are easier to approach even with small sample sizes - for instance, evidence of cultural homogeneity between the north and south of Cyprus. Although a small sample size makes it less likely statistically that suitable material will be found, this type of study depends very much on the type of artefact, so that rare items such as figurines may occur in small assemblages (as at DCD 96, see section 7.5) and provide important information. At GKB 96 there is a large overall sample size, but very few artefacts such as figurine fragments and picrolite; nevertheless these rare items give evidence both of contact with the south of the island and strong cultural homogeneity in some aspects (see section 7.3.13)). One important area of research of the current project is the investigation of distribution patterns of different types of artefact, and clearly one cannot produce meaningful distribution diagrams from very small samples. However, in many cases some artefact types were found in sufficient numbers to be used not only alone, but in opposition to the small numbers of other types found on the site. Despite the problems, distribution diagrams were attempted in many cases with small sample sizes so that all data should be treated as equally as possible, although the computer programmes were not always able to cope with the small numbers (discussed in section 3.21). It has been found generally that even when small numbers of artefacts are involved, they produce interesting patterns which may be relevant to an interpretation of site extent or the recognition of activity areas.

3.8 Grid Survey and Systematic Total Surface Collection

Four sites, Ayios Epiktitos-*Mezarlik*, Edremit-*Haci Ismail*, Tatlisu-*Kuyu Mevkii* and Goceri-*Koca Belenk* were the four sites to which grid survey was applied. Artefacts that were beyond recognition due to wear and tear were not collected.

The decision for total collection was taken when our trial exercise of random, or chequerboard, collection proved that lots of diagnostic artefacts were in 'not to be collected' squares. Also, in order to study artefact scatter density on a site, total surface collection provides the most reliable data. Random sampling or partial collection would have yielded insufficient data for analysis in order to tackle the questions raised in this research.

The aim of total surface collection was to provide a more detailed spatial and chronological definition of the occupation of sites than previously available, and to define more accurately the distribution and density of extensive 'field scatter' which spread on and in between sites.

After the boundaries of the surface scatter were marked, total surface collection was carried out over the estimated borders of a site by dividing the whole surface into 5x5m squares. Each square with a co-ordinate ID would be walked either up and down within the square or as a spiral starting from the edges of the square and gradually ending up in the centre. At the end, the square would also be given a thorough check by one or both of the two experienced walkers. All certain artefacts of all categories were collected in a bag and labelled according to their grid co-ordinates, site abbreviation and year, initials of the surveyor, and the date it was collected. When collection of a grid square was completed, the bag would be left in that grid square for line collectors. It was a two-person job to collect the bags from the grids and put them in a line bag. One person would have a check list plan of the site with grid and line numbers and alongside, the other person would write the labels and put the grid bags into a larger line bag. On the check list information such as, who walked the line and if anything was collected (some squares produced nothing) would be recorded. In this way any mis-written labels would be corrected and each line would be kept together. Although everything was double checked before we moved anything from the site some problems still occurred. Although briefed in the beginning, a couple of students made changes on the alphabetical section of the survey plan and used letters O and I which had been avoided for causing confusion with numbers. This was noticed too late. These same students had bad writing which , when they were left in charge of collecting and checking the grids, caused confusion between the letters H and K, L and I and C and G. As a precaution for anyone who might want to study finds from the sites in the future a list of grid numbers and plan on indestructable paper is attached. Sometimes for simplicity in covering the site each field that the site is located in would be gridded regardless of there being no artefacts scattered at the edges of the fields. In this way, the boundaries of the site would show anyway during analysis.

3.9 Intensive Survey

In this thesis, when referring to my own survey, intensive survey as distinct from total surface collection, means systematic walking of fields with low artefact scatters or in search of artefact scatters. A field was walked by a team of walkers, lined up two metres apart, walking in a straight line. The two metre gap allows each walker an overlapping view either side of them. Large fields were divided into artificial sub-fields and walked in the same manner, collecting diagnostic and selected representative artefacts.

3.10 Extensive Area Survey

In this thesis, when referring to my own survey, extensive survey means the intensive field walking of a large area. For example, the area would be fields around a known site or a site that is grid surveyed. Extensive area survey in combination with intensive survey was used for detecting shifting and drifting settlements, for exploring the relationship of the known sites in the area and putting them in context. A full sheet or maximum combination of four sheets of the Cadastral maps around the known site were used for this type of survey. Thus a large area around a known site was examined, and any new sites found within this area with high surface material would have been gridded and total surface collection was carried out.

3.11 Systematic Field Walking

Systematic field walking is inspecting the whole surface of the field in narrow strips walking up and down in a field by one or more people. If more than one person, every field walker keeps the same distance and pace with each other. This method is carried out for exploring possible surface scatters in a large area that was previously not surveyed and no sites were known.

3.12 What is a site?

In this thesis, when referring to my own survey, a site is a concentrated scatter of artefacts. There may also be soil marks and features. All are the results of human activity in prehistoric times. This activity occurred more than once, or for a long period of time, so that cultural debris created a stratigraphy and a surface scatter that left a pattern of artefact distribution on land. For the purposes of this thesis, a site is a site when a suitable amount of surface material is visible for use in analysing surface scatter densities.

3.13 Artefact Condition

The artefacts collected during the survey were in good condition. There was very little encrustation visible on the surfaces of artefacts, and when it was present it mainly affected ground stone. The pottery was not fragmented beyond recognition and the degree of abrasion was minimal. In some cases large sherds were collected with base or handle preserved. Soil salination, although a problem in Cyprus especially in irrigated fields, did not affect the artefacts, including those at coastal sites.

3 .14 Artefact Recording and Storage

Post-survey work in the first season was carried out in Kyrenia Castle. Due to water shortages in the summer months, and the problem of getting a water tanker up the narrow entrances of the castle, a special permit was received from the Department of Antiquities and Museums to carry out post-survey work in the lodgings of the survey team. Artefacts were washed and marked appropriately, with site code and grid numbers. During recording, they were separated into artefact categories such as ground stone, chipped stone, diagnostic sherds etc. and packed separately after being counted, weighed, drawn and photographed in appropriate groups. After the completion of study the artefacts were stored in the allocated store room below the shipwreck museum in Kyrenia castle.

3.15 The Site Code Designation

The site code designation given uses an abbreviation of the village or village and locality names, followed by the year of the survey plus the grid number if the area was gridded, or the field plot number if the area was only field walked (see list of abbreviations for sites codes). In the cases of the area surveys, the whole area's designated site code was maintained throughout the area survey, rather than changing every time a field overlapped or moved into another locality within the area. In the record sheets, however, locality names are recorded to enable the future researcher to find the exact location. On the whole, if previous work had been carried out on a site, such as Ayios Epiktitos-*Mezarlik,* this well-known name was retained as it was, rather than using current names (which are given in brackets). If a site was newly discovered, or lesser known in the literature, current names have been used, and the name recorded on pre-1974 maps is given in brackets. The convention of locality names followed by village name was introduced during the British Mandate period. All the sites and cross references for the names are given in Appendix A. Each site code designation is unique to each site and it is repeated at all levels of the recording system.

3.16 The Place Names

Place names contain important sources of information for archaeologists, linguists, and historians. The uses of place names were discussed recently in a conference held in September 1997 at Edinburgh University, School of Scottish Studies and the results were subsequently published (Taylor, 1998). As Taylor writes, without place-names we would not be able to find our way in the world; we would be lost without them (Taylor, 1998:1). Without place names the author of this thesis would not have been able to find and record the results of the survey. There are messages encoded in place names which could be about the original topography, describing the features and shape of the landscape or the potential for settlement or exploitation, and it is therefore important that a record is kept of all names for a place, rather than choosing one and ignoring the rest.

So far there is only one deliberate published example of using place-names for finding sites in Cyprus, but this was confined to pigmy hippo or elephant fossil sites. These fossil sites are believed by the locals either to be the bones of forty Saints that travelled around the island and died, or the bones of dragons. Held carried out a survey in the villages in which the place-names contained dragons or a specific and peculiar saint's name, and discovered a relationship with a number of fossil sites (Held, 1992). See Appendix B for further discussion of place-names.

3.17 Site Recording and Artefact Recording Forms

The site recording form is designed to ask a series of questions about the site, its surroundings and resources. There were several artefact recording sheets: pottery, ground stone, axe, special find, chipped stone, shell and bone (see chapter 4). The recording sheets were hard copies of the database format, ready for a computer input without editing.

3.18 Photographic and Drawn Records

The surveyed sites and the artefacts were all photographed in black and white print as well as colour slides. Copies of the photographs for complete or important artefacts were provided to the Department of Antiquities of TRNC on individual inventory cards. The rest of the photographs, negatives and colour slides are in the possession of the author.

In the 1995 season all diagnostic artefacts were drawn at 1:1 scale except very large artefacts like querns (drawn at 1:2) or small artefacts drawn to larger size (at 2:1). In 1996 this procedure continued with one exception, the drawing of all querns or grinders. This was reduced to drawing just unusual querns or grinders, rather than all fragments of this artefact group. As for pottery, all rims, decorated sherds and base forms were drawn, while straightforward slipped or monochrome sherds were only counted and weighed. Copies of the drawings were submitted to the Department of Museums and Antiquities. All the drawings were done on graph paper in a form ready for inking. The shading on the drawings was done by means of stippling. The inked drawings in this thesis are only a selection of artefacts chosen amongst unusual and complete ground stone; diagnostic sherds such as painted motifs, bases, handles and rims; and a selection of chipped stone chosen according to their features.

3. 19 Field Survey and Research Equipment Used

Prismatic compass, optical square and ranging poles were used for taking reference readings on the site and for setting up a framework for gridding a site. For marking the reference reading points and the compass readings iron stakes, a can of fluorescent paint and labels were used. Each 5m square of a grid was read from the stretched 100m, 50m or 30m tapes, and marked by flagged arrows.

For recording the artefacts, calipers, scales, ruler and pottery diameter reference sheets were used. Indestructible labels, self-sealable and other strong plastic bags of various sizes, and large storage cases were used for storing the collected material. The above-mentioned simple tools were essential for carrying out an effective survey.

3. 20 Experimental Use of Global Positioning System

In 1995, I hoped that a Magellan II GPS would aid us in finding sites quickly by inputting the grid references given for 1:50,000 scale K.717 map series in Stanley Price. The first experiment was carried out on sites whose location and map references were known. Unfortunately the GPS was at least 300m out and therefore proved not to be of much use at all. The use of 1:5000 topographical maps combined with 1:2500 Cadastral maps proved to lead us to the sites more quickly, and to their exact spot.

3.21 Computer Database and Graphics Software

Irregular power cuts during the day and night limited the computerisation of recorded data. Therefore the intention of regular data input had to be abandoned. This led to a very large accumulation of data inputting.

Two types of computer hardware were used. The first was Macintosh Powerbook 145B, LCIII and Apple Pro. Software used for the writing of this thesis was Word for Mac version 5.0a; for data entry and storage, relational database FileMaker Pro 3; and for the graphs Cricket Graph for Mac.

The second computer hardware was a network which was used for analysing data and creating artefact scatter diagrams. The software used was FileMaker, Access, Excel, Unimap on a central University computer, Paint Shop Pro and Power Point. The FileMaker Pro was useful for storing data and simple to develop a database format. However, it was not satisfactory for asking queries. It was also not compatible with Unimap which plots the artefact scatters. In order to make the database accessible, data files were converted from Mac FileMaker to FileMaker Pro PC and thence to Microsoft Access. In Access it was possible to ask queries which calculated the grid values for plotting distribution graphs. The query results from Access were then exported to Excel, which enabled selection of three column values, the easting, northing and the calculated value of the grid. It was also possible to sort artefact categories in Excel and then cut and paste them as values for plotting more detailed distribution graphs. The three column data was saved as text format which could then be exported to Unimap, a mapping program. The

Unimap programme was capable of producing distribution graphs of the co-ordinates and values given in two and three dimensions as contours and grids. Printing of graphs straight from Unimap was not possible. Therefore, images from Unimap were captured and then imported by the Paint Shop Pro program where the captured images were edited. Because of the large amount of memory each graph used, printing from Paint Shop Pro was problematic. As a final resort, all graphs were pasted one by one into Power Point, which allowed not only the printing of the graphs but also the appending of captions.

The distribution graphs could be printed in four different ways: two dimensional grid; two dimensional contour; three dimensional grid; and three dimensional contour. One offsets the others' disadvantages. For instance, three dimensional ones gave good perspective in viewing the distribution but blocked part of the graph if readings were high on the front. In this thesis the three dimensional grid is used as the main graph and the two dimensional contour where it failed. All distribution graphs are oriented with north at the top, opposite the caption. This is the same orientation as the maps, so distribution graphs can be used easily with the site maps.

There were some unsolved problems with creating distribution graphs. Sometimes it was not possible to get a distribution graph because of a low number of artefacts or having too large or small a survey area. This was partly because of my decision to use an interpolating programme. Interpolation is beneficial when a large number of artefacts is in question, since artefacts were collected within a 5 x 5m grid rather than having their precise findspot logged. A programme which highlighted individual squares without interpolation would ignore the fact that artefacts may have been found close to the boundaries of grids rather than in the centre or spread evenly across them. This means that if the grid had been placed, for instance, 1m further in any direction, or more especially if the grid size had been greater or smaller, the artefacts might have been in different squares, and the result on the distribution graph would be different. Therefore a programme which appears to be more accurate than an interpolated one could actually give a less accurate impression of the general distribution of finds. Without interpolation, it would be less easy to see broad areas of high and low density. However, when artefact numbers are low interpolation is misleading, as it takes an average point and spreads that density across the site, giving the impression that an equal or graduated diminishing number of items was found throughout, although artefacts may only have been found in one square.

Another problem was with the size of grid squares on the print out - I was unable to locate the source of the problem and change the sizes of the grids. Therefore, sometimes there are no complete sets of distribution graphs - in a couple of instances the weight or number graphs are missing. In addition, sometimes the printed grids are not square. One reason for this could be the fact that data was continuously exported from one programme to another and it failed to transfer properly.

3.22 Maps Used For The Survey

Without any maps it would have been impossible to find and to record more information on the sites mentioned in this thesis. Acquiring maps was not very easy at the start, none of the published maps being available for sale in North Cyprus, and access to sales in the south causing some difficulties. An anonymous donor provided me with the sheets of the topographical maps at 1:50,000. This map was useful in locating the sites in relation to one another. For establishing a site's location, smaller scale maps were needed. Small scale maps such as 1:2500 and 1:5000 are more reliable in terms of references and give a smaller circumference for finding the site location.

3.22.1 1: 5000 Scale Topographical Maps, 1986

The creation of these maps started in 1980, through the aerial records made by the Turkish Airforce. The main isographic works were completed in the Turkish Army Topographical Unit, Ankara. The Turkish Cypriot Map Office in Cyprus has been working on filling in the details. The map series only covers the borders of the Turkish Republic of Northern Cyprus, and this consists of 594 sheets. This series comprises one of the most up to date detailed maps available for the north. In my survey, I have found them extremely useful for designing my route to the specific part of a village or a landmark that will later enable me to find the recorded site by using the Cadastral maps. The 1:5000 scale maps are designed to be used in conjunction with Cadastral maps, as well as aerial photographs. Many sheets lack information such as locality names and some antiquities, as they are still in the process of completion.

3.22.2 1: 2500 and 1: 1500 Scale Cadastral Maps

Cadastral maps go back to the beginning of the 20th Century (Cadastral Survey 1:2500, prepared by the Land Registration Office. Department of Lands and Surveys, between 1903-1929). The towns and villages are in 1:1500 or in some cases 1:2500, the land otherwise is always in 1:2500 scale. These maps are also known as the Kitchener maps, and were originally made to establish land ownership. They are detailed to the extent of showing terracing walls for preventing erosion (the British Government used to encourage locals by paying them for a certain length of wall they made). The field plot numbers give excellent guidance for establishing the exact location of the site. In Stanley Price's gazetteer, these references were used instead of other map references. Although generally Stanley Price's work has been invaluable to me, in some instances, especially in Degirmenlik (Kythrea) and the Karpas areas, the co-ordinates quoted by Stanley Price, from whatever source, were not in those villages named but in the sea or some unrelated parts of the island. This caused a lot of difficulties for my work. Therefore, once again I would like to stress the importance of Cadastral maps and recording of new sites with reference to three map systems, of different scales. The Cadastral maps are now updated by the Map Office of the TRNC for the northern part of the island.

I have used two different versions of the Cadastral maps. One was the old version of Cadastral Survey maps, the other a recently upgraded version of the same. The locality names and cross-references were established through a Gazetteer (TRNC Ministry of Interior, 1992)

3.22.3 1: 50, 000 Scale Maps

K717 Cyprus. 24 sheets, Directorate of Military Surveys, Ministry of Defence, UK. 1973. UTM Grid. The same version in Turkish prepared by the Turkish Land Forces dates 1986, was useful for overlapping 1:5000 scale maps and the aerial photographs.

3.22.4 1:250,000 Scale Geology Map

Geological map of Cyprus, compiled, designed and drawn by the geological survey department, Ministry of Agriculture, Natural Resources and Environment, Cyprus 1995. The geology map was used to identify areas of specific geology, and rock sources.

3.22.5 1:250,000 Scale Hydrological Map,

Prepared by the Geological Survey Department, Cyprus in co-operation with the United Nations survey of ground water and mineral resources, 1970.

3.22.6 The Hydrography Map, 1:300,000

1983 Turkish Republic, Naval Forces Navigation Hydrography and Oceonography Office, Sea Map series, East Mediterranean, Turkey-Cyprus-Syria, Anemorium Point-Banyas, scale 1/300 000. Depth in metres. Map No: INT 3602/33.

The hydrography map was used in order to investigate the depth of the sea and to create hypotheses concerning sea level changes which may have affected the prehistoric shoreline settlements. The map was also used to show the distances, depth of the sea and the currents that may have influenced the route of the new settlers on the island and the sailing back and forth from the neighbouring mainland.

3.23 Aerial Photographs

3.23.1 Military Aerial Photographs

The aerial photographs taken by the Turkish Air Force towards the end of 1974 were available for my use in the Map Office in Nicosia. These photos were taken from 8,000 feet and are at a scale of 1:16,000. I used the photographs to see if there were any visible marks on the grounds of a known site. This was unsuccessful and the study of the aerial photographs for finding sites was abandoned. However, these photographs are useful for pinpointing the site in a large area. There are new sets of aerial photographs taken for the production of the 1:5000 scale maps, but these were not available.

3.23.2 Aerial Photographs in this Thesis

In the autumn of 1998, the author finally received permission for the aerial photographing of the sites surveyed in this thesis. A light aircraft from the North Cyprus Turkish Air Association was given to the author's service for a day. All the photographs were taken by the author with a Canon A1 camera on Kodak Gold colour print films 100 ASA. The photographs were taken from an altitude varying between 500 feet and 1000 feet in the early hours of the morning. Unfortunately due to technical problems with the aeroplane I was unable to take a second flight to cover the inland sites.

3.24 Local Contact

An important aspect of carrying out a survey smoothly is good relations with the villagers, muhtars, farmers and landowners. Field Archaeologists must always remember that they do not have the right to walk into anyone's land, therefore they must behave like a guest. In Cyprus, people are usually tolerated for walking across a field, but if the field is fenced or walled no-one is expected or tolerated to jump over it. During my survey I came across many curious people and discovered how quickly the villagers get to find out that there is a group walking in the fields. As in all typical Cypriot communities, there have been many interesting suggestions made amongst the villagers as what we are actually doing there. I have found it useful to visit the village coffee shop and talk to the muhtar of the village, showing him the permit for survey and introducing the team and the government representative. This always worked for our benefit, the village muhtar being respected within the hierarchy, and the villagers did not bother us .

3.25 Problems

During the 1995 survey season a major forest fire broke out on the north face of Kyrenia mountains. The fire was only brought under control after three days of terror and by that time a total of 6,953 hectares of forest was burnt. The fire affected the survey in two ways. The first is that the fire covered the planned 1995 survey area and the second is that the fire came too close to our lodgings and we had to evacuate. During the evacuation, which took place in the dark due to a power cut, some files were lost with records. These records were mainly of the weight of artefacts. The author returned to Cyprus in 1997 for a short visit and re-weighed as many of the artefacts as possible. Sites with mainly ground stone were left out, because some large ground stone was beyond the weighing limits (2.8kg) of the scales used.

The fire brought advantages as well. Some overgrown sites were exposed and were made more accessible. It would have been a perfect opportunity for aerial survey after the first rains washed away the ashes. Re-plantation of the forests now hides any evidence of sites which could have been visible from the air. The author and the survey team made one visit to the Forestry Department's head camp to enquire if they had come across any sherds. We were taken to a nearby location above Six Mile Beach where Iron Age sherds were discovered, and to a site near Arapkoy (Klepini) village where mosaic floors and large pithos fragments were discovered. These sites are not relevant to this thesis, but a report was written in co-operation with the government representative for the Department of Antiqutics. Needless to say, the prehistoric sites are more vulnerable than the Classical sites, since they need trained eyes to recognise artefacts if there is no pottery.

Chapter 4

The Classification of Artefacts

> "..making and use of typologies can never be an automatic or a wholly objective process. Typologies are created to some human purposes, which strongly affect the ways in which they are made and used" (Adams and Adams 1991: xvi).

4.1 Introduction

One major problem for my survey was that there was no prepared and generally agreed classification list for the various artefact categories. Such guidelines or agreed standards would aid in the comparison of material from different sites, and would be particularly helpful for projects such as surveys for which a range of specialists might not be available either for financial or for other reasons. This is emphasised in Cyprus, where investigators only have access to one side of the island or the other, yet they are dealing with the same archaeological cultures in both areas.

Although certain broad pottery types are recognised by ceramic specialists, it became clear that there was so much variation in the material I was dealing with that standard types might obscure important differences. Where ground stone is concerned, different investigators use different terminology for the same items. Therefore I had to approach the data largely as though no previous work had been done, although naturally I familiarised myself with the published classifications. I had no artefact specialists in my team, and as the primary aim of the survey was the investigation of surface scatters rather than detailed artefact studies, I believed it was possible to accomplish this with a general knowledge of the material. (See also chapter 8 section 8.1 paragraph 2.)

4.2 Sorting and Recording of Artefacts

Material was processed after completion of survey work on each individual site. There was one exception to this, Goceri-*Koca Belenk* (GKB 96). This was due to the large size of the site and the need to break the hard surveying work into several short collection days and likewise long strenuous recording days as well. When collected, artefacts were placed in plastic bags marked with the number of the grid square they were collected from, or in field-walked areas, the number of the line and the initials of the walker. All artefacts from each bag were washed separately and dried in wooden trays then marked and bagged. At this stage artefacts were divided into three main categories: ground stone, pottery and chipped stone, and re-bagged in these groups ready for recording. Recording was done only by myself, in order to eliminate the possibility of multiplying personal differences in sub-dividing each artefact category. The artefact types were made in an accumulative manner: a first type would be compared with a second and a third, and if not the same as the recorded ones, it was added to the type list (Orton et. al., 1994: 78). In the end there was a list of type series representing, for example, different types of rim, which then became the rim classification list.

4.3 Measuring Artefacts

Each artefact category had a separate recording sheet requiring different types of measurement and description (see Appendix C for artefact measurement guidelines). Besides main artefact categories such as pottery, ground stone and chipped stone, some other artefact types and finds needed separate recording sheets, for instance axes, shells, stone bowls, discs and figurines. In general, all categories were measured for length, width and thickness, and counted and weighed. Recording of each artefact group and the attributes are discussed under the artefact headings.

4.4 The Chipped Stone Classification

Chipped stone classification suffers from the recording problems discussed above (section 4.1). There are no guidelines for even the basic recording of prehistoric chert in Cyprus, which would be useful for establishing standards; and detailed studies of Cypriot Neolithic stone tools, whether chipped or ground, are few and, in many instances, technically incomplete (Adovasio et al, 1972: 356). Moreover, as a result of the idiosyncratic and "ad hoc" nature of much Cypriot prehistoric chipped stone, the Neolithic and Chalcolithic material does not conform to mainland styles and therefore to the classifications generally used (McCartney 1996).

In my classification I used some of the basic terms used by Adovasio, who divided chipped stone into technological classes: flakes, blades, chunks, chips, cores (nuclei) and their platforms as flat, faceted and punctiform platforms (Adovasio, 1972: 360, table 7). He had 11 tool types including end scraper, side scraper, projectile point and knife. My own categorisation was only into major technological classes: tool, chunk, flake, core and chip. When choosing these terms I followed the limitations of my knowledge and how far I am able to recognise chipped stone types. Where I was certain, I made suggestions as to tool types; otherwise they were recorded under six basic categories: tool, flake, chunk, chip, core and chert ball (sometimes recorded as hammer stones by others such as Peltenburg). This method was less problematic for a non-expert such as myself, while still providing basic information. Obviously, recognising different flint technologies to assess external influences is beyond the training of the writer, as is reporting on use-wear analysis. However, considering that the detailed study of the artefacts and their categorisation, classification and typology as well as technological information is not the main aim of this thesis, nearly all artefacts were recorded essentially to a degree of detail sufficient for other specialists to work from and take further. Since one of the aims is to distinguish or establish artefact distributions, this level of recording was sufficient for my work.

4.4.1 Recording Chipped Stone

The recording sheet contained eight fields: grid number, colour, artefact type (tool, chip, flake, chunk, core, chert ball), length, width, thickness, weight, number of pieces per grid or line. Tools were recorded individually and drawn. Obsidian was treated in the same way as chert.

4.5 The Pottery Classification

Pottery is one of the most abundant and valuable data categories that can be used to date a site. The quality of pottery collected from the surface of an archaeological site depends upon its exposure to erosion, rain, being walked on, ploughed and other physical damage. By the time it reaches the hands of a surveyor, it is usually undiagnostic because of the wear and tear to which it has been subject, yet from these fragments, surveyors try to reconstruct information about that particular site. In addition, not every surveyor is a pottery expert, and the fragmentary state of the ceramic evidence makes it harder to diagnose and classify pottery than if one were carrying out an excavation. For example, a red sherd may be picked up as red monochrome but could actually be part of a larger motif on a vessel of red on white painted ware, and therefore initial recording as red monochrome would be misleading. It must also be borne in mind that there are no known complete Chalcolithic assemblages from the north of Cyprus to help our understanding and categorisation of diagnostic pottery from surveys. When added together, these factors make the study of pottery from surface survey a delicate ground to tread upon. If the sherds are worn, and the surveyor's expertise is limited to putting the sherds into one of the classifications offered by other scholars - especially those dealing only with southern sites - the study of this valuable material may turn into a nightmare and runs the risk of misleading others. In this thesis pottery is not the main focus, and therefore detailed study is superfluous at this stage. However, a simple categorisation does put some sherds into a common or universal language.

4.51 Recording Pottery

All diagnostic sherds were recorded individually, and non-diagnostic sherds were recorded in groups. The pottery recording sheet consisted of 11 fields: grid, ware type, Munsell colour, sherd type, number of sherds per type, weight of sherds per type, total number of sherds per grid or line, total weight of sherds per grid or line, sherd thickness, rim percentage and rim diameter. In the computer database this is elaborated since one field may contain more than one answer, for instance, a Munsell colour for both the inside and the outside of a sherd.

4.5.2 Ware Types

Since there was no single agreed system for recording pottery, neither from excavations nor from surveys done in Cyprus, I was left with very little confidence in the existing classifications and drew up my own pottery recording system that I built on gradually as I recorded. As a result, I have made rather exhaustive descriptions of some groups, especially of the most abundant pottery. It is hoped that this detailed recording can be used by experts familiar with the material in the south of Cyprus, which is not accessible to me, to ascertain the level of similarity and difference between groups.

The ware types used bear no resemblance to other classifications used in Cyprus, as they are far more detailed (see list in Appendix D). Although it was clear that much of the material could be classified under the ware names normally used in Cypriot pottery studies - mainly red monochrome painted (RMP), red on white (RW), coarse ware, some red and black stroke burnished ware (RB/B), and a very little black topped, slipped - many colour variations were observed by the author. Rather than forcing them into existing categories, a decision was taken to make a far more detailed classification based on difference, rather than using the very broad categories in common use. In this way, any disadvantages arising from lack of familiarity with pottery wares, which could have resulted in mis-classification, were turned into a possible advantage by examining the material with an independent eye. This might result in recognising more diverse pottery wares than is generally done, and could lead to some interesting data on household production, or the shifting and drifting of settlements, through the recording of minor differences in wares. Although time did not permit an extensive analysis of all ware types in this way, the validity of this system is tested to some extent in chapter 7 (see section 7.3.10).

4.6 The Ground Stone Classification

As with the chipped stone and pottery, ground stone is also difficult to classify for similar reasons - the lack of any specialist consensus or a consistent system. This category can be sub-divided according to its function and form. Most of the ground stone measurement guidelines were taken from Wright 1992, this being the only publication that dealt with a Near Eastern ground stone classification system. With slight alterations this system was suitable for fast and efficient recording. However, I did not divide each artefact group into sub-divisions and give them another name. This was to keep artefact names comparable with Cypriot data and to be able to recognise the distribution of different broad types of artefacts, rather than specific sub-groups.

4.6.1 Recording Ground Stone

Each artefact was recorded individually. The ground stone recording sheet consisted of nine fields; grid number, artefact type, condition, length, width, thickness, weight and rock type. Additional measurements were made for stone bowls such as depth and diameter. The measurements were then going to be used for metrical analysis to aid comparison. Due to time constraints, and the specific objectives of the thesis, this was not possible. However the information is available. The measurement guidelines are the same as those used in other studies carried out in Cyprus, and can be seen in Appendix C. Axes were treated as a separate group and had a separate recording sheet because they needed different measurements. As they may relate to very specific tasks in specific locations, and occur in large numbers, it was felt that recording as a separate group might lead to interesting distribution information.

4.6.2 Terminology

Since in Cypriot archaeology some ground stone types have different names according to the project, I explain below what I mean by certain terms which do not have clear or simple usage in all prehistoric publications concerning Cyprus.

Quern: In this thesis a quern is the inactive stationary stone at the base, which is used for grinding in conjunction with grinders (Elliot, 1983:23). Querns are larger than grinders and have curved edges (eg. fig. 3.214).

Grinder: In this thesis a grinder is the motionary stone used on top of a quern for grinding. It is usually large enough to require the use of both hands to push it to and fro on the quern. Frankel uses the term rubber (Frankel and Webb 1996) and Swiny uses the term quern (Swiny, 1986a:24) for the same item (eg. Figs. 3.141-145).

Crusher: In this thesis the term crusher is used because of the shape in section, having a flat bottom and a rounded top. A crusher almost always has a dimple on the top and sometimes on all sides. Although usually round, it may be rectangular in shape and can generally be held in one hand. The dimples would allow them to be used for crushing or hammering in, and the flat base was probably used for grinding or crushing. However, they are less likely to have been used for grinding because they are almost always perfectly shaped, and no uneven ware is apparent as on some grinders. In Cyprus these items are usually referred as hammerstones (eg. Figs. 3.152-156).

Other ground stone artefacts follow the same terminology as that generally used, and no special comment is necessary.

4.6.3 Identification and Sourcing

The island of Cyprus is divided in two convenient geological parts: the volcanic south with igneous basalt massif, and the sedimentary north with limestone and dolomite scarp. This division, and certain rock sources such as picrolite, micro gabbro, makes the study of stone artefact sourcing relatively easy when an artefact with a certain kind of rock type from the Troodos mountains such as picrolite is found during the survey in the north. This can shed light on the movement of materials, and the possibility of communication between far-flung settlements in prehistoric times. Some of the questions to be answered are: via which route were these artefacts or raw materials transported? Was it for exchange, and if so what was traded in return? Was this source controlled by individuals or communities near the source, or was there open access? What other sites are between the source and the find spot?

A number of the rocks used for ground stone tools were identified by a local geologist, but unfortunately it was not possible for the entire assemblage to be examined. It is clear that several picrolite and micro gabbro artefacts were found on the surveyed sites, which indicates contact with sources in the south. Further work will be carried out in future in this direction.

4.7 Axes

The variety, number and quality of axes found during my survey was high, and the differences and similarities from site to site were noticeable, suggesting that the various styles could be related to different periods. The large numbers involved were remarkable, especially on sites dated to the Chalcolithic period. In addition to obvious axes, many unworked axe-shaped pebbles were found during the survey. These were not collected, but their presence and position were noted. Since they were far away from any natural source or transportation such as a beach or river, the author is inclined to regard them as part of the prehistoric assemblage, gathered as raw material and not yet worked. However, it is difficult to make any definite suggestions about raw materials found during surveys, whereas from an excavation this may be possible, as seen from Kissonerga-*Mylouthkia* cache KM 1531.01-18 (Peltenburg 1998:plate 33:2).

My own observations of differences and similarities of axes between sites were supported by Aikman, who has noted that Chalcolithic blades differ from Neolithic blades (Aikman, 1978: 27), and it was decided that in addition to basic recording, the study of axes from the survey should be taken a step further by establishing these variables in order to see if it were possible to date them and to set up an evolutionary diagram for stone axes until the beginning of metal axes. It was partly for this reason that they were treated as a group separate from the ground stone, and that a wider range of measurements and comments was recorded. One problem with trying to do this was the fact that survey material is not in context. However, there were other dateable artefacts amongst the survey material such as pottery, as well as enough excavated material for comparison, so that such a project was feasible. Ultimately, however, the idea of axe dating was seen to be a complete study in its own right and was left for the future.

4.7.1 Recording Axes, Adzes, Celts and Chisels

The term "axe" has been used to include all axe-like tools. The recording sheet consisted of ten fields: the grid number, condition, artefact type, length, width, butt, blade, cutting edge, rock type and weight. The condition is recorded as complete, damaged for more than 50% survival, fragments for less than 50% survival, and unfinished. Unfinished axes also included pebbles in the shape of an axe.

Chapter 5

The North -West Coastal Survey

5.1 The Geology and Land Formation

The survey of the terraces of the northern face of the Kyrenia mountains is the focus of this chapter. The sites surveyed in this area lie on the three intermediate terrace levels with altitudes of 25-50 metres, 70-100 metres and 160 metres. These natural terraces with fertile fields for agriculture as well as for grazing animals and surplus water from the springs created a suitable settlement environment in prehistoric times.

5.2 Areas and Sites

The north-west coastal survey covered several village areas - Catalkoy (Ayios Epiktitos), Edremit (Trimiti), Karsiyaka (Vasilia), Beylerbeyi (Bellapais), Kayalar (Orga), Karaman (Karmi), and Alsancak (Karavas) - and they will be dealt with in this chapter in the order shown here. Some areas contain several sites.

5.3 Research in the Area of Catalkoy (Ayios Epiktitos) Village

The area covered by this survey is to the north of the village of Catalkoy below the rocky plateau that the village stands on. The survey area covers the three mile wide strip of flat land between the mountains and the sea. The soil in the area is very fertile and water must have been plentiful from the known springs and deep dry river beds. The sites surveyed in this section - *Mezarlik* and *Kel Ali* - were previously known. *Mezarlik* was tentatively dated as Chalcolithic and *Kel Ali* as Early Bronze Age. The fields between and around were field walked systematically. *Mezarlik* and another two locations with high artefact densities were grid surveyed, the rest was field walked as part of the area survey.

5.3.1 Site Environment

The site of *Mezarlik* and the whole survey area is on a gentle slope. The village is on a higher site of terrace formation which shows a sharp change between the village and the site. The land the site is situated on is divided by many man made terraces c.1m high. (During the British Mandate period, peasants were encouraged by payment per yard to build these terraces, in order to arrest soil erosion.) As well as protecting against erosion, these terraces act as field boundaries. To the east, past *Kel Ali* locality, is the perennial river of *Evlek Deresi*. There was a spring on the cliff face north of the village, which has now dried up. The area has good arable land with very deep brown soil. There is no evidence of soil erosion.

5.3.2 The Vegetation and Recent Land Use

The main crops in this village are olive and citrus trees. There are also large fields that are purely for wheat or barley. The soil between the trees is tilled regularly for market gardening. Access to the town of Kyrenia and to other towns is good. With both mountain and sea views, the village attracts not only week-enders but also people who would like to have a semi-village life in comfort as well as having access to work. This has attracted new building of villas and has therefore affected the value of the land. It is now far more profitable to sell the land for building than trying to get a harvest, putting increased pressure on the archaeological sites.

5.3.3 The Village Name

The Greek Cypriot village name Ayios Epiktitos (Ayios = Saint), is said by Goodwin to mean "requested to come" referring to a 12th century saint who supposedly came from Germany. The Turkish Cypriot name for the village, Catalkoy, is said by Goodwin to be "not new", meaning that the name Catalkoy goes back to the Ottoman period (Goodwin, 1985: 334). It means 'fork village'.

5.3.4 History of Research In Catalkoy Area.

Ayios Epiktitos - *Mezarlik*

Map reference: XII:31E1

Plot number: 410

The name *Mezarlik,* which means cemetery in Turkish, has been applied to a large area that crosses over into other localities. The earliest publication concerning *Mezarlik* is by Dikaios, who dug a trial trench here in 1934 in plot 410 (Stanley Price, 1979: 103). The trial excavation went down to the bedrock, finding an occupation deposit 1.60m deep. The only description we have of the structures excavated is mention of three phases of stone hut foundations. The artefacts are mainly fragments of pottery, plus two complete pots. Amongst the sherds, red wares were dominant in comparison with the red on white ware. Other artefacts such as flint implements, stone axes and steatite (picrolite) ornaments were also found (Dikaios, 1938: 74).

Stanley Price visited the site on three occasions, twice in 1971 and again in 1972. From the building foundations, roadworks and the surface of the fields, he observed many sherds, flints and stone implements.

In 1973, during a survey programme around Kyrenia district, Peltenburg carried out a surface collection at *Mezarlik* area on plot numbers 390/1, 393/2-4, 408, 409, 413/2, 416 and 607/14-15. Surface artefacts collected did not differ much from those found by Dikaios. A large amount of pottery from later periods as well as prehistoric sherds, ground stone tools such as axes, a macehead fragment, chipped stone tools, a pendant and a figurine were found (Peltenburg, 1985a: 100). In 1995 the author found all the bags of material from Peltenburg's survey stored in Kyrenia Castle. The artefacts were in paper bags which were not intended for long term storage, and hence most were fragile and torn. However, with maximum care it was possible to separate and assign the majority of the sherds to their bags which had the plot numbers written on them. In addition to the plot numbers mentioned above, some bags bore the numbers 390, 607/1-5 and 410. After sorting, the material was marked with site and plot numbers and re-bagged. The diagnostic pottery and other artefacts worth recording were drawn and photographed. The figurine which is mentioned by Peltenburg (1985a: 100) may have been found amongst the sherds in 1995. Unfortunately it was amongst those that had fallen out of the torn bags, and therefore it is not possible to say exactly which part of Mezarlik it came from. In the publication this figurine had no description or drawing, but since no artefacts were removed from Kyrenia Castle it is assumed that this is the figurine rather than a second previously unrecognised figurine.

Ayios Epiktitos -*Kel Ali*

Map reference: XII:31E1

Plot number: 462

In 1934 Dikaios carried out trial excavations at the localities of *Kel Ali* and *Mezarlik* . At *Kel Ali* he discovered a roughly circular hut with postholes and a floor covered with small stones (Dikaios, 1936: 74). During this excavation he recovered 110 sherds of which the largest group, 43 sherds, were unassigned to any ware. Of the remainder there were 40 red on white sherds, nine red lustrous sherds and the rest were from later periods. As well as pottery, 24 chert and five flint chipped stone tools, a fragment of an adze (Peltenburg, 1985a: 100) and steatite ornaments (now generally accepted to be picrolite) were found (Dikaios, 1938: 74).

In 1971, Stanley Price visited the site during his field work. He observed a few sherds and stone implements in the locality of *Kel Ali* (Stanley Price, 1979: 103).

In 1973 Peltenburg and his team were unable to relocate this site during a survey programme around the Kyrenia district (Peltenburg, 1985a: 100). It is probable that Stanley Price's visit two years previously and his collection from the surface cleared away evidence so that Peltenburg could not confirm the existence of the site.

Ayios Epiktitos - *Xylomandra* (Karaburun).

Map reference: XII: 24E

Plot numbers: 41.1/1, 42.2/1.

This coastal site is located on the third headland to the west of the site Ayios Epiktitos -*Vrysi* It was first brought to the attention of the Cyprus Museum officials by Mr. T. P. Lightbody in 1950 and it was recorded as *Sinomandra*. On the Cadastral maps it is spelled as *Xylomandra*. Following this report, Cyprus Museum staff collected axes, pestles, a handstone, vessels, a flint blade, antler fragments and pottery . The pottery consists of polished ware, red lustrous and red on white (Stanley Price, 1979a: 104).

In 1971 Stanley Price visited the site twice, and found surface material: sherds, flints, stone implements and a few bones (ibid :104). Peltenburg's 1973 Kyrenia survey included Ayios Epiktitos-*Xylomandra* as well. His surface finds were consistent with those previously noted on the site: red on white sherds, some of which were diagnostic, a pierced pottery disc, chipped stone tools, stone axes, a bowl and a jasper nugget.

Ayios Epiktitos - *Vikla*

Map Reference: XII:17W

Plot number: 32

The only information about this site is from Stanley Price's Gazetteer. The site was discovered by Mr. Lightbody and reported to Cyprus Museum officials in 1951. As with *Xylomandra*, it is on a headland near the coast. The reported finds were broken axes, a pounder and a flint scraper (ibid :103-4).

Ayios Epiktitos - NE of Village

Map Reference: XII: 23

Hardly any information is available about this site. Stanley Price's Gazetteer only gives map references, without any locality name and he mentions that an axe was found in 1971 (probably during his survey, but this is not clear) (Stanley Price 1979a: 105). This may well have been an isolated find.

5.3.5 1995 Archaeological Fieldwork in Catalkoy Area

The initial aim of the survey was to relocate all the known sites, especially the site of *Mezarlik* in the area of Catalkoy, by following the map references published by Stanley Price. Sites such as "N.E. of village" were not found due to insufficient information and lack of locality name. The sites of *Xylomandra* and

Vikla were found on the map but it was not possible to carry out a survey due to access problems.

5.3.6 Catalkoy 1995 Area Survey Results

The first area survey was carried out on the northern edge of Catalkoy . The area survey is presented under two sub-headings, *Mezarlik* and *Kel Ali.* These names refer to two sites that were recorded separately. The areas around both sites were field walked and are discussed in connection with the each site. The *Mezarlik* area survey covers the west of the area; three areas grid surveyed will be discussed later in this chapter. The *Kel Ali* survey covers the areas where the *Mezarlik* survey finished to the east, stopping at the *Evlek Deresi* river (Map 4).

5.3.7 Ayios Epiktitos - *Mezarlik* : The Grid Survey

Mezarlik (Turkish) named after the old cemeteries (now hardly visible) has recently been renamed *Havuz* (meaning water pool, as one exists in the field). The archaeological site of *Mezarlik,* surveyed under this name, expands into other localities such as *Dort Donum* (*Deurt Donum, Vouppa Louri* and *Vouppa*), *Yolcati* (*Kannavos*), and *Kirmizi Armutluk* (*Kokkini Appidhia*). A general assessment of all these fields was carried out so that a decision could be made as to where to set up the grids. The most appropriate places were deemed to be:

1 - where there was a high concentration and spread of surface scatter ie. sherds and

stone tools.

2 - where the site was not overgrown

3 - where it was not interfering with the land owners' crops and privacy.

5.3.8 Survey Strategy

The grid survey was carried out on plot numbers 409, 607.5, 607.6, 607.9, 607.10, 418, 417. The rest of the plots were field walked systematically with careful description of the position of artefacts found within the field. In this way the artefact scatter was observed on the site and recorded.

Plot 409 was given the code AEM 95, plots 607.5 and 607.6 were given the code AEM 95-1 and plots 607.9, 607.10, 417, 418 were given the code AEM 95-2. Although the different codes do not represent separate sites, this system was used for several reasons: it is easier to study a large area in small parts; it is easier to survey smaller fields to keep the numbers and letters of co-ordinates simple and short; and surveying of fields in smaller parts meant the survey could be divided into manageable sizes suitable for a day's work.

5.3.9 The AEM 95 Grid Survey - Artefact Distribution

Site code: AEM 95 - followed by the grid references.

Map reference: 1:2500 Cadastral XII: 31E1

Plot number: 409

Locality name: Mezarlik

Survey method: 5 x 5 metre grids of total surface collection.

Extent of site: 30 x 70m

Recent land use: citrus trees and seasonal vegetable gardening.

Finds summary: chipped stone: 254, pottery: 2430, ground stone: 97, axe: 7, shell: 2 (figs. 3.6, 3.9-11, 3.16-17, 3.20-26).

A team of five and a total of 13 hours of work was put into surveying a total of 84 5x5 metre grids . The work included setting up the grid over the whole area covering plot 409, and total collection, labelling and bagging of artefacts on site. A number of artefacts were later handed in by the owner of plot 409, but as there precise find spots are unknown, they have been deal with among the finds from field walking (below).

5.3.10 The Chipped Stone (figs. 3.17, 3.20, 3.22)

A reasonable amount of chipped stone was found in this field, and from figure 2.1 it can be observed that there are two high peaks of concentration, one at 3D and the other at 4G . Together with these two peaks, there is an area in the centre of the field forming a band of chipped stone concentration extending from west to east and gradually decreasing in both directions north to south. Although the maximum number is "above 5", not generally regarded as a high number, the way that the chipped stone is distributed in a manner of gradual decrease around the high peaks suggests that patterning exists despite the modest number of artefacts per grid. The chipped stone distribution by weight demonstrates a shifting of the high peak seen in the number of chipped stone artefacts (figs 2.2). The weight of chipped stone is not dispersed as a gradual spread, as with the number graph, but has three high peaks with gaps in between them. The weight of the chipped stone in this example identifies and separates three different concentrations areas.

5.3.11 The Pottery (figs. 3.23-24, 3.26)

This field produced nearly two and a half thousand sherds, many of them unfortunately too small to be suitable for a study of motifs. As shown in figures 2.3a, and 2.3b, there is only one high density peak of sherd distribution at grid squares 6G and 5G, with a gradual decrease away from these two grid squares. The lowest sherd density is along the lines 1 and 2 E to P. At grid squares 1A and 6A there are low patches but the most visible area is the east end of the site.

There is very little difference between sherd distribution weight and the number. The highest peaks for weight are still at 6G and 5G (figs. 2.4a, b, c).

5.3.12 The Ground Stone (figs. 3.6, 3.9)

There is not a large variation in the number of ground stone artefacts per grid square. The highest number in a square is three. There are three concentrations of ground stone: the first is at 4K, 4L, 5K, 5L and their immediately surrounding squares; the second is grid squares 3O, 4O and 5O; and the third covers squares 4-6 C-D (figs. 2.5a, b). The weight of the ground stone shifts the areas of concentration relative to the numbers of ground stone. This is due to the number of ground stone fragments versus complete ones, the former weighing less than the latter. Squares 4-6 H-L show the highest concentration by weight. The second area of weight density is grid square 6C and its immediate surroundings near which is the third area with high weight 6B, 6D and 5C (fig. 2.6a).

5.3.13 The Axes (figs. 3.10, 3.11)

There were only seven axes from this area, so it is not possible to carry out any distribution analysis. A further five axes were handed in by the land owner, and as their position in the field is not known, they have been included in the fieldwalking discussion (see section 5.3.33).

5.3.14 Discussion of the AEM 95 Grid Survey

The spread of chipped stone stretches through the centre of the field from the west to the east. The sherds are concentrated at the bottom centre of the field, and are by far the largest group of artefacts found in this field. The ground stone distribution is similar to that of sherds, concentrating east of the sherd concentration. All three artefact groups - chipped stone, pottery and ground stone

- are distributed without overlapping into each other's areas. The fact that the artefact types are not all found in the same areas reveals a pattern that is not disturbed by ploughing and is likely to reflect actual deposition and use. The high number of sherds found suggests that this field is the centre - or part of the centre - of the living quarters of the settlement (see section 5.3.38 for discussion). Another possibility is that it could be a kiln - the way all the sherds are condensed in one area only does raise the possibility of a dump for faulty pots. However there was no other evidence to support this hypothesis. If we consider that the pottery scatter locates the domestic area of settlement, and the ground stone and chipped stone are mostly found outside the domestic area, we can take the results of the distribution of artefacts one step further. The sherd distribution covers an area of only 35 x 15 square metres which means it can accommodate only a few closely spaced houses. To the south of the sherd concentration, where field 409 stops, field 410 starts. That is where Dikaios carried out his trial trenches and found house foundations. The two fields are separated by a fence and hedge. The exact location of Dikaios' trenches is no longer visible, but his discovery of house foundations associated with pottery supports the idea that more houses would be associated with the adjacent pottery scatter in field 409.

5.3.15 The AEM 95 - 1 Grid Survey

Site code: AEM 95 - 1 - followed by the grid references

Plot numbers: 607.5 and 607.6

Locality name: Dort Donum

Survey method: 5 x 5 metre grids of total surface collection

Extent of site: 40 x 30 square metres

Recent land use: a few olive trees, back garden of a farm house

Finds summary: chipped stone:9, pottery:2, ground stone:35, axes:9 (figs. 3.10, 3.16, 3.22, 3.24).

5.3.16 The Distribution of the Artefacts

In terms of artefact density AEM 95-1 was not as rich as other grid surveyed fields, and had a noticeable lack of pottery. However, the concentration of all the artefacts created a pattern that was apparent even at the time of collection. With the exception of the ground stone, all the artefact categories occurred in very low numbers; consequently any sound analysis is not possible, but discussion is useful. Below is the interpretation of the artefact distribution of AEM 95-1, first of the small amount of chipped stone and pottery, then the ground stone and the axes.

5.3.17 The Chipped Stone (fig. 3.22)

The density of chipped stone distribution by number (figs. 2.7a, b) has a very clear definition of two high concentration points at the north-west and south-east corners with a blank area between them. However, the number of chipped stone artefacts is so low, and the difference between the highest and the lowest number is so narrow, that a sound interpretation of this distribution can not be made (fig. 2. 8).

5.3.18 The Pottery (fig. 3.24)

Only two sherds were collected from the site and it is not possible to draw any distribution results. They are from squares 1D and 3B.

5.3.19 The Ground Stone

The distribution plot for the ground stone was not possible with Unimap due to the low number of artefacts. However from figure 2.9 it is possible to observe the distribution of ground stone implements. There are two hot spots with as many as three artefacts at squares 1F and 7H. The others are with two artefacts at squares 7D, 5D, 5B, 3D, 2C and 1B. As mentioned earlier, the relation of artefacts types produces interesting patterns, for example artefacts that are of the same type were found in the same squares or in squares close by. Some of these squares are 2C (2 grinders), 3D (2 querns), 7H (2 pounders), 7D (2 querns) and 7C (1 quern). At square 5B there is a quern and in the next square at 6B is a grinder, these implements complement each other and originally they may have been deposited together (fig. 2.9).

5.3.20 The Axes (fig. 3.10)

The 13 axes are closely distributed in two areas creating distribution patterns. The squares that create the first area are, 2C, 3D, 3D, 4C and the second area are, 5H, 6E, 6G, 6K, 6K, 7C, 7F, 7H and 8C (fig. 2.10) .

5.3.21 Discussion of the AEM 95-1 Grid Survey

There are artefacts from all the main categories, ground stone, chipped stone, axes and pottery, but in very different quantities from the preceding field. The artefact types are spread differently from each other. The only overlaps are on squares 5B between chipped stone and ground stone; squares 7C and 3D between ground stone and axes; and squares 1D and 3B between ground stone and pottery. The conclusion that could be drawn from this is that the ground stone is more widespread in the areas of the other artefact types. It has been noticed previously that the axes and ground stone distribution follow an overlapping pattern.

5.3.22 The AEM 95 - 2 Grid Survey

Site code: AEM 95 - 2 followed by the grid references.

Plot numbers: 607.9, 607.10, 417, 418

Locality name: Dort Donum

Survey method: 5 x 5 metre squares of total surface collection.

Extent of site: approx. 140 x 40m

Recent land use: olive trees

Finds summary: chipped stone:37, pottery:5, ground stone:217, axes:26, shell:2 (figs. 3.1-7, 3.9, 3.11, 3.16, 3.18-19).

AEM 95-2 is the eastern continuation of AEM 95-1. This is a long field and the squares extended beyond letter Z continue with letters AA, BB and CC. The numbers were not affected.

5.3.23 The Chipped Stone (figs. 3.18-19)

A total of 37 chipped stone artefacts was collected from the surface, of which the majority are concentrated in one area (figs. 2.11a, b). There are clear gaps in the distribution of the chipped stone: it is concentrated in lines 7-10 K-P area where there are three or more chipped stone artefacts per square. The second area where three or two pieces of chipped stone per square were collected is in lines 7-10 T-W. Immediately away from these two high density points there are at least one or two artefacts surrounding the hot spots. The rest of the site clearly has no artefacts. This is an interesting result since chipped stone working areas could be confined to one area as knapping is expected to be. Chert or flint knapping debitage can be hazardous, therefore if it is carried out near a settlement, as in this case, then the writer suggests that the knapping was carefully carried out in certain areas. On the other hand, depending on artefact types found, it could be a work area where chipped stone tools were used. To shed more light on these suggestions, it would have been best to produce a distribution graph to show the spread of each chipped stone artefact types. However this was not possible with such a low number of chipped stone items. Instead, a print out of the finds data has been studied (fig. 2.12). The table shows that 23 out of 37 chipped stone artefacts collected are tools, only eight are flakes, five are chunks and one is a chip. Since I am no expert in chipped stone studies, I will leave this discussion with a suggestion that the area where the chipped stone artefacts were found was most probably used for activities that involved chipped stone tools, such as cutting or skinning.

5.3.24 The Pottery

Only five sherds were collected from this field, which is an insufficient number for interpretation. The grids, wares and sherd types were as follows: 5N cb handle or part of a figurine; 5N coarse handle; 6X coarse rim; 7L worn rim; 8D bm cx .

5.3.25 The Ground Stone (figs. 3.1-7, 3.9, 3.16)

Ground stone comprised the majority of finds from this field, with over 200 artefacts. They are confined largely to the northern and central part of the site (figs. 2.13a, b). Other than those high concentration points, there is an even distribution of ground stone over the site with the exception of a few blank areas. There are three main blank areas, the south-west, north-east and south-east corners. Further interpretation can be carried out when the distribution of the ground stone is done by type to see whether complementary artefacts occur together. There are several occurrences of complementary artefacts in the same grid squares, as well as several artefacts of a single type found together. Some examples of grid squares with complementary artefacts are 10S, 2T, 3S and 6S.

Examples of the same artefact types occurring together are, 1K, (five pounders, two querns and two grinders), 3M, 5R and 8U. The same result of having complementary tools in the same grid squares was seen in AEM 95-1 ground stone. There is no discussion of ground stone by weight because of the missing records as explained in section 3.23 of chapter 3.

5.3.26 The Axes (fig. 3.11)

A total of 26 axes was collected from the surface. It was not possible to get a distribution graph by number for reasons explained in section 3.21. The hot spot for axes when measured by weight is in the lower centre of the field (figs. 2.14a, b). This is a very different result from the distribution of axes by number, when the axes are loosely scattered in a diagonal running north-west south-east through the middle of the site. Only five of the 26 axes lie in the area of high weight distribution. This is due to the high ratio of fragmentary axes to substantially complete axes (14:12) (fig. 2.15).

5.3.27 The Shell

Two sea shells were collected from the surface, and thus like the pottery they are difficult to interpret. A damaged fossil was found in square 3M; and a damaged pierced shell, which could be a bead, was found in square 5U.

5.3.28 Discussion of the AEM 95-2 Grid Survey

All artefact types were present in AEM 95-2 grid survey. The majority of the artefacts were of ground stone, which dominated the field. The ground stone artefact types were very varied, suggesting the existence of a special area for work that involves ground stone tools. The fact that this high density of tools occurs away from the main domestic area indicated by the pottery concentration in field

409 is of considerable interest, both in terms of understanding sites, and in terms of recognising their extent. The chipped stone, with more tools than chips and other refuse, also indicates a work area. Sherds and shells are too few in number to have a place in this discussion.

5.3.29 AEM 95 Field Walking

Site code: AEM 95 followed by plot number

Map reference: 1:2500 Cadastral XII:31E1, XII:23 E2

Plot numbers: 232, 235, 237, 238, 390/1, 393/3, 393/4, 400, 402, 403, 404, 405, 408, 410, 411, 412/3, 413/2, 414, 415, 416, 419, 420, 421, 422, 431, 431/1, 431/2, 607.1, 607.2, 607.3, 607.4, 607.8, 607.11, 607.12. These field numbers exclude the grid surveyed fields

Locality names: Mezarlik or Havuz; Dort Donum; Yolcati; Buyuk Bahce; Kadi Bahcesi; and Kirmizi Armutluk

Survey method: systematic field walking

Area surveyed: approximately 540 x 300 metres square

Recent land use: olive and citrus groves and market gardening amongst the trees.

Finds summary: plot 232 & 235: axe (2); 400 & 402: ground stone (1); 404: ground stone (1), axe (1); 408: ground stone (1); 410: chipped stone (2), ground stone (2), axe (6); 413/2: chipped stone (1), ground stone (1), axe (2); 414 & 415: ground stone (2), axe (4); 419: ground stone (1), axe (1); 607.8 & 607.11: chipped stone (3), axe (3); 607.12: axe (1); in addition to these, certain artefacts handed in by the owner of plot 409 (ie. AEM 95) have been included here as their precise provenance is unknown: chipped stone (1), ground stone (2), axe (5) (figs. 3.8-9, 3.12-14, 3.25-26).

5.3.30 The Chipped Stone (figs. 3.21)

The distribution of chipped stone was confined to fields 410, 413/2, 607.8 and 607.11 (see Map 4). Only six chipped stone artefacts were found, of which five are tools and one is a flake. Chipped stones are spread around the gridded fields or where the main concentrations of artefacts were found. With such a low number of chipped stone artefacts it is not possible to attempt anything more than a superficial interpretation of the artefact scatter. There seems to be little movement of chipped stone from the main artefact concentration centres; these three locations, at one of which Dikaios dug his test trench (plot 410), are a continuation of the site from plot 409 of AEM 95; and these chipped stone tools represent work areas at which the activities were carried out with these tools, which were not necessarily in the settlement area or in the houses.

5.3.31 The Pottery (figs. 3.25, 3.26)

In this large area, only 11 pieces of pottery were collected, mainly from fields 410, 411 and 413/2 which are the fields surrounding 409 (AEM 95). Fields 415 and 607.12, the other two fields with pottery, are side by side. No further interpretations could be made about the pottery because such a small amount was found.

5.3.32 The Ground Stone (figs. 3.8, 3.9)

The distribution of ground stone was more widespread than the chipped stone but again the number of artefacts is very low, therefore it will not be possible to make any valid interpretations based on the numbers. However, the occurrence of various types of ground stone tools are interesting. The majority of tools are crushers (3) and pounders (2), representing activities that were of pounding and are confined to two areas. The only quern and grinder, tools that complement each other, were found in field 410. Even though the artefact numbers are low, the types of artefacts represented in the fields had a pattern. The ground stone tools occur around the main artefact concentration areas. This could be interpreted as: further extension of the site; movement of artefacts; or work areas outside the main settlement. These areas co-incide with the occurrence of chipped stone artefacts.

5.3.33 The Axes (figs. 3.12-15)

Out of 25 artefacts, 24 were axes and one was an adze. Complete axes make up the largest group (40.34%), followed by damaged axes (28.77%), fragments, (25.23%) and unfinished axes (5.67%) (fig. 2.16). The distribution of the axes and adze by field and number is shown on figure 2.17. The number of axes is great enough for interpretation. The highest number of axes come from plot 410 (6 axes). Apart from this, axes are found widespread in 12 different plots. Five axes from 409 (AEM 95) were handed in to us by the land owner, and as their position on the grid is unknown they have been included as part of a field walk collection instead of the grid survey.

5.3.34 Discussion of AEM 95 Field Walking

The distribution of the artefacts in AEM 95 area survey is widely spread over an area of at least 570 x 320 square metres. The spread of artefacts in this area is uneven. Some fields are totally artefact free, while others have reasonable amounts. The distribution of the types of artefacts in these fields is the most interesting aspect. It is apparent from the systematic field walking results that the artefacts found are mainly axes and ground stone, not pottery. This is a significant result, since ground stone tools are heavier than sherds and are not likely to be moved by natural agencies. Although they are most likely to be moved by humans, during clearance of fields for ploughing and for use in walls, there is no evidence that this has occurred in this case.

5.3.35 Ayios Epiktitos - *Kel Ali* 1995 Field Walking

Map reference: XII:31E1

Plots surveyed:461, 463, 464, 475/2, 477, 481, 482, 483, 484, 485, 486 and 489.

Locality names: Kel Ali; Kaymakam Sirti; and Harmanlar.

Survey method: systematic field walking

Area surveyed: approximately 380 x 320 square metres

Present land use: villa complex on plots 462 and 465, others carob, olive and citrus trees.

Finds summary: no artefacts were removed from this site.

5.3.36 Survey Strategy

In 1995, the *Kel Ali* (meaning in Turkish "bald Ali") locality immediately below the village of Catalkoy was field walked. In Stanley Price, the site of *Kel Ali* was given as plot number 462. The field walking covered plot numbers 461 and part of 465. Although plot numbers 431/2, 463 and 464 were walked as part of *Kel Ali* they are actually closer to the *Pervolin tou Kadi* or *Kadi Bahcesi* locality (meaning both in Greek and Turkish, "Gardens of the Judge"). Plot 462, where the actual site was recorded, lies behind the fields with plot number 465 which have recent villa complexes built on them. Due to the changes in this area it was difficult to establish if the site had been built on or not. However no surface finds were found in the surrounding area. On large parts of this area, construction was still in progress in 1995. On plot 461 to the west, complete querns, an axe and stone tool fragments were observed. This field is flat on top with a gradual slope to the west. Immediately to its east is the Evlek Deresi river. Further to the north, at the locality known as *Phtana* or *Kaymakam Sirti,* plot number 475/2, undiagnostic prehistoric sherds were found. No artefacts were collected during the *Kel Ali* field walking.

In 1995 during the initial work of relocating sites in the village of Catalkoy, *Kel Ali* was relocated by following the Cadastral map references given by Stanley Price. During the survey it was estimated that part of the site has villas built on it.

5.3.37 Ayios Epiktitos - *Kel Ali* Area Survey Results

This is discussed separately to avoid confusion because the plot numbers change and repeat the same numbers as *Mezarlik.* Both sites were also recorded as two separate sites by Dikaios (Dikaios, 1936: 1-81). *Kel Ali* plot number 401 (Map 4) had heavy grinders and querns. There were also many fragments of ground stone tools. These artefacts were not collected because the field they were in was very large and it would have been best if the site were divided into smaller units for collection in order to get some sense of distribution patterns. Due to the shortage of time, resources and heaviness of the artefacts I chose not to carry out an intensive survey and surface collection. In field number 475/2 worn prehistoric sherds were seen but again not collected. The decision not to collect in this area was made because of the poor quality of the artefacts, which would not have given a lot of information. The only information we can derive from these artefacts is the extent of artefact spreads that may be the result of shifting settlements.

5.3.38 Conclusions Concerning the Entire Catalkoy Survey

The two sites, *Mezarlik* and *Kel Ali,* were obviously areas with high artefact concentration which led Dikaios to carry out trial work. In his excavations he found structures and similar artefact assemblages in both areas. The artefact scatters found around these sites could at first sight be thought to be the result of a spreading site and drifting or shifting but variations in density could also indicate variations in type of settlement. Dikaios' excavation and Peltenburg's survey results showed that the site belongs to the Chalcolithic period. From the survey material collected by the author the pottery held the major clues towards dating the site. The pottery motifs (figs. 3.23-25) show similarity with those of other Middle Chalcolithic sites. The ground stone, axes and chipped stone from surveys are unfortunately not dateable so far. However, in the author's opinion, certain types of axe could be dated relatively. Another dateable material from the surface artefacts is the picrolite adze (fig. 3.10, AEM 95-4O) and picrolite axe fragment. Although there are occasional finds of picrolite on Aceramic sites, it is mainly connected with the Chalcolithic period. From Peltenburg's survey a figurine that was re-discovered in the 1995 season is another significant artefact which helps with dating the site. It shows the same characteristics as the female figurines of the Chalcolithic period in south-west Cyprus. Another aid to dating is assessing the absence of certain types of artefacts that would normally be found in a survey of a site of a certain period.

It can be seen from Map 4 that the site covers a large area within which there are areas with high concentrations of different types of artefact. From AEM 95 a high concentration of pottery was collected, whereas from AEM95-1 and AEM 95-2 it was mainly ground stone. The fields in between had some pottery which was gradually overtaken by the high number of ground stone artefacts. This result shows that the further we move away from the area where there is a concentration of pottery, the quantity of ground stone increases. This is an interesting result which could show that in the Chalcolithic period there were special work areas for each task. Field 409, where the sherds were found, is in the author's opinion the centre of the living quarters of the settlement. There are several reasons for this view. As pottery is used for domestic purposes such as cooking, eating and storing food, it is likely to be found in greatest numbers in domestic and/or storage areas, and the pattern of other sites, especially the excavated ones, shows that the pottery is mainly in the houses. The pottery distribution in this field is fairly central in terms of the distribution of other artefact groups, and abuts field 410 where Dikaios's excavations revealed the foundation of houses, indicating that the centre of the settlement could have been shared between fields 409 and 410. Finally there are other artefact distributions in this area which show other domestic activities circulated around the part suggested to have been occupied by houses. On the other hand the ground stone, which is mainly for processing food, was found at some distance from this area. A possible explanation is that it represents working areas outside the main settlement, which in this case could have been closer to the fields where the harvest was collected. Only excavation can resolve the possibility of a settlement stretching from AEM 95 grid survey to AEM 95-1 and AEM 95-2 grid survey areas. If they are all part of a large contemporary settlement, then what we are seeing are spatial divisions of functions within an organised community. The shifting and drifting of the settlements of AEM 95 area seems apparent when the results are viewed together on Map 4. However, secure dating is needed for this hypothesis, in order to recreate the pattern of settlements shifting. It is also possible that there was more than one contemporary settlement in this area.

This survey has shown the very great differences in distribution of various types of artefact over a large area. There was very little pottery outside plot 409, which produced a high number of sherds from the grid survey, as well as most of the chipped stone, while a large amount of ground stone was found in AEM 95-2. This result is important in terms of methodology. It suggests that excavators, in placing their trenches where the highest concentrations of pottery occur, may well be missing a large part of the site in which activities involving ground stone and chipped stone tools took place. This has serious implications for excavation strategies.

5.4 Research in the Area of Edremit (Trimiti) Village

The site at Edremit was discovered by the author during the 1995 fieldwork season. The site was given the locality name *Haci Ismail* and archaeological research was carried out using the site code EDT 95. Only one small part of the site, the area with high artefact concentration, was gridded. Around this gridded area, an intensive field walking survey was carried out.

5.4.1 The Location and Landscape of Edremit

Edremit village is on the west of Kyrenia town, above Karaoglanoglu (Ayios Yeorgios) and below Karaman (Karmi) villages (Maps 5 and 6). Edremit is a small settlement with a large church which has helped the settlement win the title of village. Since there is hardly any flat land for farming and only a small herd of goats and sheep on the north-west of the village, the main income of the village comes from sources other than farming or husbandry. The village houses are on either side of the road which leads to the much larger village of Karaman. Edremit is perched on the suddenly rising skirts of the Kyrenia Range at about 160m above sea level. On the western side of Edremit village the Pinar or Vrysi River (both names mean 'spring') runs north-south, deepening into a valley only by the side of the site . There is also a spring line north of the village with a water reservoir tank.

5.4.2 The Vegetation

The vegetation consists mainly of olive trees, with some almonds. The area used to be on the edge of the pine forest which extended all the way to the mountain tops. However, in 1995 a disastrous fire destroyed the majority of the vegetation and the trees in this area. The fire started on the west at Ilgaz (Ftericha) and finished on the east at Alevkayasi (Halefka). The only trees that escaped the fire were the ones closest to the houses where the fire was fought back by the owners. The forest above the village was completely destroyed.

5.4.3 The Village Name

Trimithi means terebinth bush in Greek, and tremble in Italian. The name could have its origin in either language. The other alternative known names are; Tirmit, Tremithunda, Tremithi, Trimiti. In 1900 most of the land was owned by a Turkish Cypriot Judge called Haji Yavuz (Goodwin, 1985: 1608). After 1974, the village was named Edremit, a simple adaptation of Trimithi to fit Turkish speech patterns.

5.4.4 History of Research in the Area of Edremit

There are no records of archaeological research in Edremit and its immediate surroundings. However, the village above Edremit is Karaman (Karmi), which has recorded archaeology - the well-known Early Bronze Age cemetery at *Palaealonia* and possible Chalcolithic site at *Phountji*. There is also a Karmi Block Forest cave in the mountains. Since these sites are not far from each other it is acceptable to include these sites as Edremit area.

5.4.5 Site Location

The site is located at the very bottom of the Kyrenia mountains, on a spur on the east cliff of this valley to the north of the village, west of the village road. It was discovered by the author in 1995 during a visit to a copper and antique shop. A sherd was found underneath the tree on which the copper pots were hanging. A few more sherds and a ground stone tool were found during investigation of the adjacent field. The possibility of a site was confirmed when the author walked to the lower terraces down the slope where there was a high concentration of painted sherds.

5.4.6 Survey Strategy

Two types of survey were carried out on this site. The first was the grid survey with total surface collection on the areas of high artefact concentration. This area was given the code EDT 95-1 (Map 5). The second method was systematic field walking and surface collection carried out in the fields surrounding EDT 95-1. The walked fields were given the code EDT 95 followed by the plot or field number (see Maps 5 and 6).

5.4.7 The EDT 95 - 1 Grid Survey

Site code : EDT-95-1.

Map reference: 1:1250 Cadastral XII.18.E.2

Plot number: 1/2

Locality name: Haci Ismail

Survey method: total collection on a 5 x 5m grid

Extent of site: approximately 95 x 30m

Recent land use: olive trees

Finds summary: chipped stone:3, pottery:1018, ground stone:14, axes:2 (figs. 3.27, 3.32-38, 3.40-46 and Appendix E)

The grid survey in plot number 1/2 extended from the east of the water tank (marked T on map) excluding the part above the terrace in between plot numbers 1/16 and 1/5. The grid length was 20 metres from north to south and 50 metres from west to east. Although the plot was larger than the area gridded, the east end of the field was overgrown and had trees which obstructed gridding that area.

5.4.8 The Chipped Stone (fig. 3.35)

There were only three chipped stone artefacts from this site: a large flake from grid 4G, a tool from grid 3E, and a chert ball (hammering stone or bolas) from grid 3C. The numbers are too low for any analysis of spatial distribution, but the three finds were concentrated within five metres of each other.

5.4.9 The Pottery (figs. 3.37-38, 3.40-46 and Appendix E)

Over one thousand sherds were collected from the site. A selection have been illustrated, and details concerning those shown as rim profiles can be found in Appendix E. The overall sherd distribution is clearly defined and concentrated to the south and south-centre of the site (figs. 2.18a, b). When studied in detail, a high peak of concentration in the south centre of the site shows a gradual decrease in number as it spreads away from this point. The east edge of the site, which is ten metres wide and 20 metres long, shows a low density spread of sherds. It is noticeable that the diagnostic sherds cluster in the same area as the majority of sherds (fig. 2.19). When examined by weight, the peak points of concentration is still preserved (figs. 2.20a, b), although there are slight increases and decreases in some squares when compared to the number of sherds. The squares which show increased density by weight are 2D, 4D, 4G and 2 E. The only decrease is on grid 1E. These increases and decreases are extremely narrow and do not create a big difference between the number of sherds, and so are not likely to be significant. The similarity of the two distribution maps, by number and by weight, shows the equal sizes of sherds across the site.

5.4.10 The Ground Stone (figs. 3.27. 3.34)

The distribution of ground stone by number shows a clear area of concentration in the north centre of the site. The rest of the site has an even distribution of ground stone tools except in the north-west top corner, where there is a gap. The variation of ground stone densities is very slight, ranging from 2+ to just one. Ground stone artefacts are far less common than sherds, therefore even these low numbers are significant for ground stone distribution. The ground stone distribution by weight shows two areas of heavier artefacts. The north-centre area of high concentration that was observed in the number of ground stone artefacts is still preserved when ground stone is distributed by weight. The second area of concentration, although not as heavy as the first area, is in the south-east corner. The difference seen between the weight and the number distribution charts is due to the variable condition of the artefacts, which is accentuated by the low numbers involved. The distribution graphs for the ground stone at this site are affected by the tendencies of the computer programme to interpolate graduating colours on the graphs where low densities are involved (see section 3.21). Figure 2.21 can be referred to for actual numbers and weights.

5.4.11 The Axes (figs. 3.32-33)

There are only two axes from this site: the first is a complete axe in grid 3D and the second is an unfinished axe from grid 1K (figs. 3.32-33). No interpretation can be given from their distribution.

5.4.12 The Distribution of the EDT 95-1 Artefacts

Pottery formed the bulk of artefacts collected at EDT 95-1. There were 1018 sherds, of which 132 were diagnostic: painted, rims and bases. Following the sherds in descending order were ground stone with 14 implements, chipped stone with three, and axes with two.

5.4.13 Edremit 1995 Area Survey by Systematic Field Walking

Site Code: EDT 95 followed by plot number

Map reference: 1:1250 Cadastral XII.18.E2 and XXII.18.E1

Plot numbers:1, 1/1, 1/2, 1/3, 1/4, 1/5, 1/6, 1/7, 1/8, 1/9, 1/10, 1/11, 1/12, 1/13, 1/14, 1/15, 1/16, 1/17, 1/18, 1/19, 505/1, 505/2, 506, 507, 508, 509/1, 518/1/1, 518/1/3, 519, 520/2, 520/3, 521/2, 531/1, 531/2, 531/2, 531/3

Locality name: Altincik, Haci Ismail

Survey method: systematic field walking

Extent of site: approx.1040 x 780m

Recent land use: olive groves and building plots

Finds summary: chipped stone (17), pottery (23), ground stone (70), axes (19), slag (1) (figs. 3.2836, 3.39, 3.45-46)

This part of the survey was systematic field walking and surface collection in the fields surrounding the gridded part of the site. It covered the localities of Haci Ismail and Altincik to its north following the east and west banks of the Pinar river. The writing on the map is not very clear for the last two plot numbers and one seems to be written twice.

5.4.14 The Chipped Stone (figs. 3.35-36)

A total of 17 chipped stone artefacts was collected from the survey, comprising only 13.08% of the collected artefacts (figs. 2.22). Out of these 17, five were tools; six flakes, one polished; two chunks; two unknown; one chip; and one polished chert. Their spread by field can be seen in (figs. 2.23 and 2.24).

5.4.15 The Pottery (figs. 3.45-46)

A total of 23 sherds was collected from the systematic field walking, comprising the second highest percentage of artefact types with 17.69%. Just over half of the sherds, 12 of them, belong to the red on white ware type (fig2.25). The highest number of sherds, nine, were open bodied, two of which were rims. Six sherds, one of which is a neck piece, are closed bodied. There is one rim and neck of a jug, three bases and a total of three rims including the ones mentioned above (fig. 2.26). More detailed information about the sherds is given in figure 2.27. The distribution of sherds by field shows a clear peak of ten sherds in plots 1/13, 1/14, 1/15 (all three regarded as one field due to their small size and invisible field boundaries between them) (fig. 2.28).

5.4.16 The Ground Stone (3.28-31, 3.34)

A total of 70 ground stone implements was collected during the survey, comprising more than half of the total artefacts (53.85%). The spread of ground stone by field shows a varied pattern (fig. 2.29). Half of them (35) come from the fields immediately north of the gridded field 1/2, the number increasing with the greater distance from plot 1/2; another 12 come from a small area immediately south of plot 1/2; the remainder are scattered around the fields. There are eight ground stone types, in descending number of artefacts these are: quern, pounder, grinder, crusher, vessel, whetstone, whetstone/grinder, and unspecified (fig. 2.30). See figure 2.31 for more detailed information on the ground stone. It may be that the concentration of ground stone in an area separate from the sherd concentration indicates a specialised work area for certain types of food processing activities.

5.4.17 The Axes (figs. 3.32-33)

A total of 18 axes and one adze was found. Five of them, including the adze and an unfinished axe, were complete; 10 were fragments; three were unfinished; and one was damaged. Their occurrence by field shows high peaks at five in plot 1A, and four artefacts in each plots 1/5A and 1D (fig. 2.32). Details of these axes are given in figure 2.33.

5.4.18 The EDT 95 Field Walking Artefact Distribution

There are five main artefact categories from EDT 95 systematic field walking survey. These are: pottery; ground stone; chipped stone; axes and adzes; and other. The ground stone was the most common, with 70 artefacts, followed by the pottery with 23, axes with 19, chipped stone with 17 and one piece of slag.

5.4.19 Conclusions Concerning the Edremit Survey

From the Cadastral map published in 1918, the area of the site with artefact concentration is shown under plot number 1, and no terraces are shown on the map. Now this plot is divided into 19 parts. To the north of the gridded area there are terraces which were obviously not there at the beginning of this century. It is probable that the artefacts collected systematically were not simply the result of a process of natural site formation or surfacing of artefacts due to erosion, but are due to the cutting of the fields for terracing. The artefacts scattered on the surface may have washed down from the section of the terrace. If this is the case, rather than natural erosion of top soil and resultant exposure and movements of artefacts, it should not make the survey method and the result invalid, indeed quite the opposite: it is important to study the movement of artefacts even from the section of the terrace and the way they spread into the field. The section of the terrace can be treated as a part of the site with high artefact concentration. In this example artefacts can only spread to the north, east and west directions since the south is blocked by the terrace. In the case of Edremit the surface material spread over a wide area. There is no information about the way these terraces were built, therefore it is difficult to say if the artefacts were distributed artificially during the deposition of the soils from the terraces or naturally. Therefore the distribution and its variations, especially at EDT 95-1, should be treated with caution.

The dating of the site can be dated relatively from the pottery. The motifs are closest to the Chalcolithic period. The diagnostic pottery with nipple and omphalos bases is usually regarded as Chalcolithic. To be more precise from the shapes of the rims, it is clear that the rim shapes are more varied and developed than the other sites like *Mezarlik*. Therefore, Edremit-*Haci Ismail* probably represents the later part of the Chalcolithic period.

The presence of a high concentration in one part of the site, and a high concentration of ground stone in another area, mirrors what has already been seen in the AEM 95 area. It reinforces the comments made concerning that site, that the use of pottery concentrations for determining where to place excavation trenches may be skewing the information seriously, and resulting in a loss of a clear understanding of the nature of the site. The survey strategy pursued by the writer has produced a broad view of a prehistoric settlement which may not be reflected adequately through excavation alone.

5.5 Karsiyaka (Vasilia) Village Area Survey

5.5.1 Survey Location

The third and largest area surveyed in the Northern face was around Karsiyaka village. The village is below the highest peak in the western part of the Kyrenia Range, mount Kavanc (Kornos), reaching 946 metres in height. (This peak is used as one of the navigation landmarks for sailors and pilots. Only 50 miles from Anamur, it could have been used in prehistoric times as a landmark too.) Geologically, Karsiyaka is a multi-terraced village (Dreghorn, 1971: 32) and the survey area is located on the second geological terrace level with an altitude of about 100 metres (measured from the bottom of the village), made up of *Kythrea Flysh*.

5.5.2 The Environment and Vegetation

There are several spring heads in this area of which two are major. One of the largest is just above the village monastery, which supplies water to Karsiyaka and its neighbouring villages; a second is in the centre of the village and has dried up. There is a dried-up river passing through the west of the village and another, much larger one, on the western outskirts of the village near the site of Evriman.

The natural vegetation in the mountains is maquis. In and around the village olive and citrus trees are dominant. Wheat and/or barley is cultivated on some large fields below the village.

5.5.3 The Village Name

Vasilia in Greek means King. The village was renamed Karsiyaka by Turkish Cypriot refugees settled here in 1975 from Karsiyaka (or Prodhromi) village in the south. Other alternative names are Vasili, Vasilico, Vasillia, Vasilya (as Turkish Cypriots call the village) and Vasiliki.

5.5.4 History of Research in Karsiyaka Area

Thirteen localities with sites are published in Stanley Price's Gazetteer. The majority of the sites were recorded by the Cyprus Survey in 1955, 1957 and 1965, and are as follows:

The Cemetery Sites

Vasilia - *Evriman* cemetery

Map reference: XI:13W

Plot numbers: 138-9

In 1938 J. Stewart carried out a survey in Vasilia; some of his surface results and tomb finds were published in the 1960's (Stewart, 1962a; 1965). In 1955 he excavated five unusual tombs at a site known as *Evriman,* an Early Cypriot cemetery located west of Karsiyaka village. The tombs in this cemetery spread over a large area, unlike the tombs of Lapithos and Vounous which are closely packed. According to Stewart this is due to the geological features of the area. The site is dated to the Philia culture and is mainly known for its unusual tomb architecture. According to Swiny the site has a considerable cemetery of pit graves (Hennessey and Eriksson, 1988:25). During the field survey carried out in this site in 1995, the tombs mentioned by Stewart were found. They are indeed very different in form from the tomb architecture known at Vounous and at nearby Kirni. More typical simple Bronze Age tombs were located further up in the hills. The pit graves mentioned by Swiny were not noted during the survey, although the site was extremely bare after the fire which gave good overall visibility. Some shallow pits were regarded by the author as trial pits by looters, searching for tomb entrances, or tombs that have been backfilled over the years leaving a depression in the ground.

Vasilia - *Myliades* Cemetery :

Map reference: XI:13E

Plot number: 333

In 1957, the Cyprus survey recorded black slipped and combed sherds.

Vasilia - *Loukkos Trachonas* cemetery :

Map reference: XI:13W

Plot number: 21

In 1957, the Cyprus survey recorded black slipped and combed sherds.

The Settlement Sites

Vasilia - *Alonia*

Map reference: XI:13

Plot number: 2

In 1965 prehistoric sherds were found in the foundations of a house. Following this, the Department of Antiquities carried out a trial excavation in a small area measuring 2 x 1.50 x 1.50 metres. The finds were: an axe, an adze, a pestle, lumps of steatite (picrolite) and coarseware, painted, red lustrous polished and red on white pottery (Stanley Price, 1979a: 116).

Picrolite was commonly used in the Chalcolithic period and the pottery found at Alonia is mainly Chalcolithic with a few Early Bronze Age red lustrous sherds (Stanley Price, 1979a: 116). It is not surprising but it is unusual to find these two periods, Chalcolithic and Early Bronze Age, on one site and in an area with an abundant water supply. Naturally water attracted these settlements. Vasilia - *Alonia* was not included in our survey because it has been built on. From the excavations in 1965 it is clear that there is a settlement in the village further up from the area we surveyed.

Vasilia - *Stypia*

Map reference: XI:12

Plot number: unknown

An axe was found from a spring under a house and reported by A. and J. Stylianou in 1971. The map reference given is not clear and one axe does not mean there is a site there.

Vasilia - village

Map reference: XI: 13E

Plot number: unknown

In 1957 the Cyprus Survey found sherds, one of which is red on white painted; ash and charcoal layers were seen in the foundation pits of the co-operative society of Vasilia .

Vasilia - village

Map reference: No Cadastral reference. The Cyprus survey in 1957 reported an axe and sherds.

Vasilia - ***Pyrgos /Triantaphylia***

Map reference: XI:13E

Plot number: 329

The Cyprus Survey 1957. This site was surveyed by the author for the present work as two different sites (see under Pyrgos and Triantaphylia)

Vasilia - ***Harman Tarlasi***

Map reference: XI:13E

Plot number: 300

Reported by Dikaios in 1935. There are few known finds from the site. These are: pestles, grindstones, a chert blade and red burnished lustrous, combed, painted and red on white ware sherds.

There are also some unclear descriptions of sites by Dikaios, one of which is:

"On the site, which lies immediately below the west part of the village, I found white painted and red slip neolithic sherds. The site, which may be a settlement, has suffered destruction owing to levelling of the fields and the removal of stone from the foundations of the huts. Close to the site in the centre of Vasilia is the spring of the village" (Dikaios, 1935: 11).

This could be a description of Harman Tarlasi. There is another description by Dikaios that I have not been able to identify with a site. This reads:

"Among new Neolithic sites discovered was a settlement in Vasilia village where occupation extended into the early bronze age" (Dikaios, 1957: 15).

Kornos Cave

In 1955, during a security operation, Lieutenant McIntosh discovered "earthenware pots" in the cave. Following this discovery archaeologists from the Department of Antiquities and some cave enthusiasts from the British military carried out preliminary research in the cave in 1956. It was later in 1958 and

1960 that Department of Antiquities staff were able to visit the cave again (Catling and Dikigoropoulos, 1970: 37-39). The Kornos cave habitation is dated to the early Byzantine period (ibid:.43) and there is no mention of prehistoric deposits.

5.5.5 1995 Archaeological Field Work in Karsiyaka Area

Only one systematic field walking exercise was carried out at Karsiyaka, in the fields below and to the north of the main village (Map 7). Almost all previously recorded sites in this area were either field walked or visited. Site coding for this area was KYA 95 followed by the plot number.

5.5.6 Survey Strategy

I started the survey in this area from the previously known site of Harman Tarlasi and extended the survey to a very large area on the fertile flat lands below the village of Karsiyaka. Because of the low artefact densities, especially of the sherds, no sites were grid surveyed. A team of five surveyed the area in five weeks. The area surveyed covers approximately 1000 x 700m. Map 7 shows the distribution of artefact categories and their numbers by field. The finds data tables covering all the fields can be seen in figures 2.34-2.37.

5.5.7 Karsiyaka - *Harman Tarlasi*

Site Code: KYA 95 plus plot numbers

Map reference: Cadastral XI:13E:

Plots surveyed: 300 and 298/6

Survey method: Systematic field walking and surface collection

Extent of field: approx. 220 x 55m

Recent land use: wheat/barley

Finds summary: Plot 300: ground stone (41), chipped stone (7), axes (8), and pottery (4); plot 298/6: pottery (6) (figs. 3.66-73)

This site is below the old Moslem cemetery north of the village. It is on a sloping terrace east of a perennial river. Stanley Price's records show that Dikaios did work at Harman Tarlasi, however his reports on the site (Dikaios, 1936 and 1953) do not mention the site name. The only clue other than Stanley Price's publication is Dikaios's own description of the site, from which I conclude with some confidence that it is Harman Tarlasi.

"Vasilia (Kyrenia District) - The settlement, which seems to have been destroyed by modern terracing, lies on the slopes below the west part of the modern village. There I picked up sherds of the Red Lustrous ware including the variety with black inside surface, of the Reserved Slip and of the White Wares. The shapes, where evident, correspond to those from Erimi and the painted ornamentation is very elaborate and includes chequer pattern, parallel bands, and the band with dots on either side" (Dikaios, 1938: 74-75).

Plot 300 is divided into six sections by terraces which were not shown on the maps. Each terrace was walked separately and were given area numbers from 1-6. The resultant codes such as 300-A1, 300-A2 are followed by the walkers line number, producing codes such as 300-A1-L2. The areas are numbered in ascending order to the north (down hill). The lines represent the walker's line. The walkers were spaced within a few metres of each other. Walking was carried out roughly from west to east direction, parallel to the terrace walls. The line numbers varied depending on the size of the field, and were numbered in ascending order roughly from south to north. For finds data see the tables in figures 2.34-2.37.

5.5.8 Karsiyaka - *Karaogullari (Karaolies)*

Site code: KYA 95 plus plot numbers

Map reference: Cadastral XI:13.E

Plots surveyed: 268, 268A, 268B, 268C, 268D, 268E, 268/1, 268/1/?, 268/2, 366.

Survey method: Systematic field walking and surface collection

Extent of field: approx. 180 x 240m

Recent land use: agricultural - crop unknown

Finds summary: Plot 268A: ground stone (1); plot 268B: ground stone (3), chipped stone (2), pottery (1); plot 268C: ground stone (13), chipped stone (3), axes (2), pottery (9); plot 268D: ground stone (6), chipped stone (3), axe (3), pottery (1); plot 268E: ground stone (7), chipped stone (1), pottery (2); plot 268/1: ground stone (2) (figs. 3.59-65).

This is a large field with no clear field boundaries, therefore some parts of the field were divided into artificial sections and were given codes such as A, B, C, D and E (Map 7). The field was ploughed and the visibility was excellent for surface collection and field walking. Within this locality interesting artefacts were collected. These are, a stone vessel fragment and stone axes (fig. 3.64). The finds are a representative assemblage of the Aceramic period. Data tables can be seen in figures 2.34-2.37.

5.5.9 Karsiyaka - *Dag Gulu (Triantaphylia)*

Site code: KYA 95 plus plot numbers

Map reference: XI:13.E

Plots surveyed: 322, 322/4, 323/1, 323/2, 323/3, 323/4, 323/5, 323/6, 323/7, 263/1, 263/1/1, 263/1/2, 263/1/3, 2633/1/4, 263/7, 263/6, 263/5, 263/4, 264, 265, 266, 266.1

Survey method: systematic field walking

Extent of field: max. approx. 260 x 280m

Recent land use: mixed agricultural

Finds summary: Plot 322: ground stone (34 of which one is a macehead), chipped stone (2), axe (7), pottery (3); plot 323/1-7: ground stone (9), axe (3), pottery (1); plot 263/4: ground stone (1), chipped stone (1), pottery (1); plot 263/5: ground stone (5), chipped stone (1); plot 263/6: ground stone (6), chipped stone (1); plot 263/7: ground stone (7), chipped stone (1); plot 263/1/1: ground stone (5), chipped stone (5), pottery (9); plot 263/1/2: ground stone (4), chipped stone (1), axe (1), pottery (6); plot 263/1/3: ground stone (10), axe (1), pottery (5); plot 263/1/4: ground stone (1); plot 264: ground stone (2), axe (2); plot 266: ground stone (1), axe (2), pottery (2); plot 266.1: axe (2) (figs. 3.52-58, 3.76-79, 3.81-83).

5.5.10 Karsiyaka - *Koca Tarla (Pyrgos and Mandja)*

Site code: KYA 95 plus plot numbers

Map reference: Cadastral XI:13.E

Plots surveyed: 328/5/2, 328/5/1, 328/5/3, 329/1, 329/2, 329/3, 329/4, 329/5, 329/6, 330, 330A, 331/1, 331/2.

Survey method: systematic field walking

Extent of field: approx. 360 x 340m

Recent land use: mixed agricultural

Finds summary: Plot 329/1-6: axe (1); plot 330: ground stone (5), axe (2), pottery (4); plot 331/2: pottery (1) (fig. 3.86).

5.5.11 Karsiyaka - *Hudaverdiler (Myliades)*

Site code: KYA 95 plus plot numbers

Map reference: Cadastral XI:13.E

Plots surveyed: 328/4, 331/3, 331/4A, 331/4B, 331/5, 331/6, 332/1, 332/2, 332/3/2, 332/3/4, 333, 336, 239/10, 239/11, 239/12, 239/13, 242, 243, 244, 245/2/1, 245/2/2, 245/3/1, 245/3/2, 245/4, 245/4/2, 245/4/3, 248/1, 248/2, .

Survey method: systematic field walking

Extent of field: approx. 280 x 500m

Recent land use: mixed agriculture

Finds summary: Plot 328/4: chipped stone (1), pottery (1); plot 331/3: ground stone (3), chipped stone (2), axe (3); plot 331/4A: ground stone (5), axe (1); plot 331/4B: axe (1); plot 331/5: ground stone (9), pottery (1); plot 331/6: ground stone (1), pottery (2); plot 332/1: ground stone (3); plot 239/11: ground stone (2), axe (1); plot 242: ground stone (4); plot 243: ground stone (4), axe (1), pottery (1); plot 244: ground stone (1); plot 245/3/1: ground stone (4), axe (1); plot 245/3/2: ground stone (1), chipped stone (1); plot 245/4: ground stone (2), chipped stone (1), axe (1); plot 245/4/2: ground stone (1); 245/4/3: ground stone (1), pottery (1) (fig. 3.47-49, 3.87-90).

In Stanley Price (1979a:116), *Myliades* is recorded as a possible Early Cypriot Cemetery(?). The plot number for the cemetery is 333, but nothing was found on the surface of this field during the 1995 survey. The site is not cultivated, therefore the tombs have not been disturbed. Around plot 333, there are artefact scatters. For finds data, see the tables in figures 2.34-2.37.

5.5.12 Karsiyaka - *Dag Gulu (Triantaphylia - Ambeli)*

Site code: KYA 95 plus plot numbers

Map reference: Cadastral XI:13.E1

Plots surveyed: 328/2/1, 328/2/2, 328/1, 325/6/1, 325/6/2, 325/1, 325/2, 325/3, 325/4, 325/5, 326, 327/4 and 327/5.

Survey method: systematic field walking

Extent of field: approx. 360 x 160m

Recent land use: mixed agriculture

Finds summary: Plot 325/3: ground stone (5); plot 325/4: pottery (1); plot 325/5: axe (1); plot 326: ground stone (2); plot 328/2/1: ground stone (6), axe (2); plot 328/2/2: ground stone (7), chipped stone (2) (figs. 3.84-85).

5.5.13 Karsiyaka - *Dervispasa Zeytinligi (Lithari)*

Site code: KYA 95 plus plot numbers

Map reference: Cadastral XI:13.E1

Plots surveyed: 317, 318.

Survey method: systematic field walking

Extent of field: approx. 300 x 160m

Recent land use: olive grove

Finds summary: In plot 317 a fragment of a grinder was the only find. In plot 318 half of a stone vessel mortar or a bowl was found (fig. 3.50).

5.5.14 Karsiyaka - *Gumusalan (Hiliomodhousa)*

Site code: KYA 95 plus plot numbers

Map reference: Cadastral XI:13.E1

Plot surveyed: 311/7, 311/8, 311/6/1

Survey method: systematic field walking

Extent of field: approx. 500 x 160m

Recent land use: citrus orchard

Finds summary: Plot 311/7: chipped stone (39), axe (2), pottery (6); plot 311/8: ground stone (7) (figs. 3.74-75).

There were no artefacts found in plot number 311/6/1. In plot 311/ 8 there was a total of seven ground stone tools: one quern; two grinders; two polishers; one crusher; and one unspecified. In plot 311/7 here was a total of 39 chipped stone pieces of which 38 were tools and one a flake. There were 6 sherds of pottery: one brown mono handle; one cream mono handle; two ox grey mono; one ox brown mono; and one ox red on red painted. Two axes were found in this plot number: one a fragment; and one unfinished axe. For data concerning these finds, see the tables in figures 2.34-2.37.

5.5.15 Conclusions Concerning the Karsiyaka Area Survey

The data tables (figs. 2.34-37) show the distribution of the artefact types and their numbers by field. It is striking that there are reasonable numbers of artefacts at Karsiyaka scattered over a large area measuring approximately 1180 x 740m. Artefact numbers in each field were studied to see if it would be possible to determine any possible sites, and subsequently any dating of the sites, as well as shifting or drifting of settlements. This area is a prehistoric landscape and so the finding of isolated artefacts is not surprising. However at KYA 95, we are not dealing with isolated artefacts that might drop out of one's pocket but possibly the result of more complex and varied activities.

As seen from figures 2.34-37, there are field clusters with artefacts. These clusters will now be described individually, showing the reader that there are small areas of artefact scatters, which are part of other neighbouring artefact scatters which combine to form part of a bigger site catchment. The study of these fields will be carried out from the west of Map 7.

The first cluster under study is in plots 300 and 298/6. We know from Dikaios's work that Harman Tarlasi plot 300 is a site. During the 1995 survey a high number of ground stone (41), but very few pottery (4) and chipped stone (7) artefacts and a reasonable number of axes (8) were found in this plot. The neighbouring plot to the west, plot 298/6, produced 6 sherds and is probably part of the same site. Plots 300 and 298/6 contain a site, the dating of which was not possible from the artefacts found on the surface. From the previous records, however, it seems that it belongs to the Chalcolithic period.

The second cluster of artefact concentrations is in plots 268 A, B, C, D, E, 268/1 and 366. The presence of a vessel fragment similar to those from Aceramic settlements and other ground stone artefacts in these plots help with the recognition of an Aceramic site. What is unclear is if the next cluster of finds in plot 263 and its subdivisions are part of the same catchment. On the other hand, if we are determining the date of these sites from the surface scatter, plot 263 and its subdivisions have pottery and therefore I suggest that they are separate from the site in plot 268 and its subdivisions. Plots 263 and its subdivisions, 264, 266 and 266.1 demarcate a densely packed site with a good number of artefacts. Unfortunately the pottery was not obviously of any particular period, and so was no help for dating the site. To the north of these plots is plot 322. Amongst its many ground stone artefacts, this site produced a grooved stone (fig. 3.85) and a macehead fragment (fig. 3.76). These two artefacts are widely known from Chalcolithic and Early Bronze Age sites. The plots north of 322, plots 323/1-7, are probably a continuation of 322. All four areas discussed above could be the result of the same settlement shifting or drifting. Beyond the boundaries of these fields there were blank areas with no artefacts.

The third major cluster of artefact scatters to consider is the eastern side of the sites mentioned above. The plots in this discussion are 328/4, 245/4, 245/4/3, 245/4/2, 244, 331/3, 331/2, 332/1, 243/3/1, 243, 242, 331/4 A and B, 243/3/2, 239/13, 331/5 and 331/6. There were not many artefacts in individual plots but within the area there was a consistent spread of artefacts. As mentioned earlier these field boundaries are relatively modern and if we ignore them, what we see is a site with artefact scatters all over it. The ground stone seems to dominate the scene, but other artefacts such as axes and pottery are widespread. Again the pottery was not helpful in identifying the date of this occupation area.

The fourth cluster, with artefacts concentrating in plot numbers 330, 329 and its subdivisions, 328/1, 328/2/2, and 326, possibly forms another site. The number of artefacts is not as high as in the previous areas, but the type of artefact found - ground stone - is not likely to have arrived in the area as a result of post-depositional processes, and therefore I postulate the presence of another site. Dating was again problematical, as only one piece of pottery was found.

The final cluster is made up of plots 311/8 and 311/7. Plots 318 and 317 have an isolated artefact each which may be part of the same site. At plots 311/7 and 311/8 there is a high number of chipped stone and reasonable number of ground stone artefacts. It is difficult to suggest any dates for this site but it is possible to suggest, by looking at the number of chipped stone items, that some kind of activity related to it may have taken place.

To conclude, there are four areas of artefact concentration in which there are sites or a site. The first area has one possible Chalcolithic, one Aceramic and one Chalcolithic-Early Bronze Age period site. The second area is far more difficult to date, but the existence of a site or sites is recognisable. It is highly probable that this area repeats the periods in the first area. The third area, with fewer artefacts, could be a continuation of the second area, or an independent site of unknown date. The fourth and final area of site or sites is again difficult to date, although a stone mortar from field 318 (fig. 3.50) is similar to those of the Chalcolithic period.

It is obvious that the field walking carried out at KYA 95 is good for identifying where the artefacts are, but without any artefact specialists it was difficult to date the sites. Determining the shifting and drifting of settlements is also possible but again not as definite as the grid survey because the modern boundaries of the fields determine where material is recorded from. These field boundaries are irrelevant to the boundaries of ancient sites, and may obscure their relationships.

5.6 Minor Sites of the North Face

This section deals with sites that the author attempted to relocate but failed to find or found very few or no artefacts. This section also includes a brief account of Gecitkoy (Panarga) village that was surveyed for the first time in 1995.

In this section the word minor describes sites that are:

1- overgrown with poor visibility

2- built on or destroyed

3- inaccessible for various reasons

4- lacking surface finds or having a single find

5- not found due to incorrect map references

The sites in this section belong to at least one of the categories listed above. The intention of this section is to give a brief account and update our knowledge of the sites mentioned through the observations made during 1995 and 1996 survey seasons.

5.7 Beylerbeyi - *Kumbaraci* (Bellapais - *Vasiliki*)

5.7.1 Site Location

The site is located on the skirts of the Kyrenia Mountains, below the village of Bellapais at the foot of Bellapais Abbey. There is a deep ravine on the west side of the fields that runs steeply from Bellapais village to the next village, Ozankoy (Kazaphani). There is a spring nearby which is enclosed in a special room with a Mediaeval coat of arms above the doorway and inside, carvings of gothic arches decorating the taps. The spring is still in use.

5.7.2 Vegetation and Land Use

The recent land use of the area is a touristic development with some greenery. The fields surrounding the plots surveyed look deserted and overgrown. The adjacent monastery was built in the Middle Ages, and the waste thrown from the refectory over the centuries may be covering part of the site.

5.7.3 History of Research at Beylerbeyi

The site was first recognised by Dikaios as having circular huts which he dated to the Khirokitia period (Dikaios, 1936:74). Stanley Price and Peltenburg also visited the site. Peltenburg collected a number of artefacts from the surface; the only pottery found was Mediaeval (Peltenburg, 1985a:100).

5.7.4 1996 Fieldwork at Beylerbeyi

Site code: BVS 96 followed by the plot number

Map reference: Cadastral XII:38.W1

Plot surveyed: 218/1, 218/2, 214, 215, 216, and 217

Extent of site: approx. 160 x 20m

Recent land use: gardens and tourism development

Finds summary: Plot 218/1: chipped stone (2), pottery (1), ground stone (2), axe (4); plot 215: ground stone (1) (figs. 3.91-3.93).

Most of the site is now built on. The circular huts reported before the 1950's were not visible during 1996 survey. Below the Abbey, there was thick debris from the Medieval Period which may be covering the site. Surrounding fields were heavily overgrown making field walking impractical and the site may extend into these fields.

5.7.5 Artefacts from BVS 96

Ground stone, chipped stone, axes and a sherd were found during field walking. Ground stone is the most common artefact type found, consisting of five fragments of which four belong to stone vessels and only one is unidentified yet worked stone. These stone vessel fragments are typical repertoire of the Aceramic Neolithic ground stone vessels (figs. 3.91a, b; 3.92). There were four axes found during the survey of which three were fragments and one was complete. Only two chipped stone artefacts were found, one was a scraper and the other was not identified as any of the chipped stone categories given in this thesis (figs. 3.91d, e). Only one sherd was found during the survey, a coarse drilled sherd squarish in shape (fig. 3.91c). This is, however, of a later period, either Late Neolithic, or Medieval contemporary with Bellapais Abbey.

5.7.6 Conclusions

BVS 96, or whatever remains of it, is an Aceramic Neolithic site so far as one could say from the few artefacts collected from the surface. As for the fields in which they were found, it is hard to tell if the artefacts are representative of the archaeological remains it preserves, or whether they arrived there as a result of human action during the developers' work immediately above these fields. How much of the site is destroyed and how much of it is preserved is very difficult to say.

5.8 Kayalar - *Eski Bag* (Orga - *Palialonia/Ambelia/Paliambelia/Kourvelia*)

5.8.1 Site Location

Above the village centre, up the trackway between the Freestone's house and the spring. The site is located on the higher slopes of the heavily terraced spur with ravines running on its sides. The position of the site has a commanding view to the north. The area is also known as the kissing rocks.

5.8.2 Site Environment

At one time the limestone rock here was mined for lime production. There are untended trees and the land around the trees are used for grazing cows for milk which is one of the products of the village. The site was heavily terraced in the past.

5.8.3 History of Research in the Area

In 1940 Dikaios dug two trial trenches here, one at *Palialona* and one at *Kourvelia* localities. He found hut foundations in both trenches, with a depth of deposit 0.4 metres (Stanley Price, 1979a: 113). This site has been surveyed on many occasions by teams such as Peltenburg, Stanley Price and Swiny leaving very little for the author's project to collect. Peltenburg, who collected 380 sherds, dated the site to the Late Neolithic period (Peltenburg, 1985a:101).

5.8.4 1995 Field Work at Kayalar

Site code: KYR 95

Map reference: Cadastral XI.2.W2, XI.10.W1.

Plots surveyed: 240, 245, 33, 34 and35.

Locality name: Eski Bag

Survey method: field walking

Extent of site: not known

Recent land use: a few trees, grazing land for cattle.

Finds summary: chipped stone (1), pottery (6), ground stone (2), worked pebble (1) (figs. 3.94-3.96).

The land the site is on is not tilled, so there is no circulation of artefacts from the ground and the pottery found during the survey was minimal - just six sherds (fig. 3.96). Two of these are clearly Late Neolithic (fig.3.96b, c), two are Chalcolithic (fig. 3.96.a, f), while the remaining two (fig 3.96d, e) may be either Late Neolithic or Chalcolithic. The Chalcolithic sherds are similar to those found at AEM 95, EDT 95 and GKB 96, which appear to span the entire Chalcolithic period between them. The Late Neolithic motifs included both combed ware and boldly painted red on white, and bear similarities to those found on two other sites. Combed and painted ware is a common motif of Philia-*Drakos A*, whereas boldly painted red on white represents a *Vrysi*-type pottery, an impression confirmed by Watkins, who visited the site, but did not collect (Watkins, 1970: 5). No mention has previously been made of Chalcolithic material at the site.

5.9 Karaman – *Kusluca* (Karmi - *Phunji /Phountji*)

5.9.1 Site Location

On a spur below the sharply rising limestone cliff face of the Kyrenia mountains, the site is on the east of Karaman village following the track from the old primary school (now a restaurant). The site is above the abandoned church.

5.9.2 Site Environment

The site was wooded and also covered with scrub until the fire of June 1995. Now the whole area is terraced and replanted with trees. Near the site there is a spring.

5.9.3 History of Research in the Area

Peltenburg surveyed the site in 1973 and collected 168 prehistoric sherds as well as a handful of stone artefacts. The pottery was mainly red lustrous and red on white. He dates the site to the Chalcolithic period (Peltenburg, 1985a: 101-2). The Early Bronze Age cemetery of Karmi-*Palealona* lies below the village and is visible from Phunji. It was partially excavated in 1960 by J. Stewart.

5.9.4 1995 Field Work at Karaman

Site code: not applicable

Map reference: Cadastral XII:27W1

Plot number: 42/2

Locality name: Funji, Phountji and Phountzi.

Survey method: field walking

Extent of site: not known

Recent land use: uncultivated

Finds summary: none collected

Prior to the forest fire in June 1995 this site was inaccessible because of thick, harsh vegetation. However, following the fire, thick black ash on the surface limited exploration. Only a few sherds were found on the surface during a field walk but they helped the author to relocate the site.

5.10 Alsancak *(Karavas)*

Four sites were known from Alsancak village: Karavas - *Yrisma*, Karavas - *Pikron Neron* , Karavas - *Vounarin tous Loies* and Karavas - *Platani* .

5.10.1 History of Research in the Area

In 1973 Peltenburg visited Karavas-*Yrisma*, when building work revealed a site there. 182 prehistoric sherds and some chipped stone were collected but were not studied. The site was dated to the Chalcolithic period.

5.10.2 1995 Fieldwork at Alsancak

Karavas -*Yrisma* and Karavas-*Pikron Neron* (*Karamulla Mevkii*) were not found, Karavas -*Vounarin tous Loies* and Karavas -*Platani* had no surface finds.

Chapter 6

The North-East Coastal Plain Survey

6.1 The Geology and Site Environment

The north coast, with its combination of the sea eating its way into the raised beaches of soft limestone and fresh water running through the rivers and pouring into the sea, created perfect locations for settlements. The fresh water - a necessity of life - and natural harbours giving protection for the sea-going vessels of the prehistoric settlers were just some of the advantages of living along the north coast. The soil in this area is fertile and well drained. Where the fresh water meets the sea it attracts fish to eat the nutrients brought down by the rivers, creating locations of abundant fish.

6.2 Vegetation and Recent Land Use

The vegetation along the coast itself is sparse. This is due to the limestone rock along the coast which bears only a very thin layer of soil. Further inland the situation is different. The depth of soil is good enough to support trees and farming. Bands of carob and olive trees, and a very little barley, are grown. In the untouched mountains on the north-eastern coast the vegetation is maquis, providing good nesting for game birds and other wildlife. The villagers around this part of the country also grow vegetables in green-houses. These vegetables are mainly tomatoes, cucumbers, green peppers, aubergines, and marrows. Animal husbandry is another occupation in this area, mainly sheep and a very few goats (since the re-introduction of a law restricting the numbers of goats for the protection of the forests) for meat and cows for milk and milk products.

For a further description of the geology, vegetation and land use of the area, the reader is referred to the relevant sections in the Introduction.

6.3 History of Research in the Area

The most significant surveys carried out in this area were the Cyprus Survey in the 1930s, recording sites in this area for the first time, and Symeonoglou's 1971 archaeological survey in Phlamoudhi area. There is one well-known partially excavated site on the east coast at Klepini - *Troulli* .

Klepini - *Troulli* (Arapkoy -*Troulli*)

Map reference: XIII:18W

Plot number: 60/2

The site is located about 10 miles east coast of Kyrenia on a small headland. In 1941 Dikaios carried out rescue excavations after he was informed of the looting of the site. At Troulli he recognised two periods of Neolithic occupation, a pre-ceramic and a ceramic phase (Dikaios, 1962:63-72). Peltenburg later proved the existence of a considerable hiatus between the two periods (Peltenburg, 1979).

Ayios Amvrosios -*Alakati* (Esentepe - *Alagadi*)

Map reference: XIII:19E

Plot number: 102

The site was reported in 1951 by Mr Lightbody and visited by Stanley Price in 1971. Sherds and flints are the only recorded surface finds and no further information was given (Stanley Price, 1979a: 103).

Akanthou - *Villourin* **(Kucuk Erenkoy - *Seslikaya*)**

Map reference: XIV:2W

Plot number:169, 170

The Cyprus Survey recorded the site in 1934, and in 1950 Megaw (Cyprus Museum) reported the site. The finds were: axes, pestles, a handstone, a chert core, a flake and a chunk. A total of 13 sherds was found. These were: coarse, red lustrous, red on white and coarse red wares (Stanley Price, 1979a: 119, 120). Stanley Price visited the site in 1971 and 1972. He observed a few sherds, flints and stone implements.

Akanthou - *Arkosyko* **(Tatlisu - *Ciftlikduzu*)**

Map reference: VI:45W

Plot number: 176 etc.

The site was recorded by the Cyprus survey in 1931. In 1945 it was reported by G. Anastasiou (Cyprus Museum) and in 1946 by Dikaios (Cyprus Museum). On Cadastral maps the locality is *Lainon***.** The finds reported from this site are very rich in variety: a stone axe, a handstone and stone vessels; chert flakes, blades, chunks, chips and cores; obsidian blades and a chunk; animal bones ovis, sus and dama mesopotamica and perforated shell (Stanley Price, 1979a: 119).

Stanley Price visited the site twice in 1972 and once again in 1973. He found four obsidian tools, stone vessel fragments, stone implements, many chert tools and bone fragments.

Akanthou - *Lakkous* **(Tatlisu - *Kuyu Mevkii)***

Map reference: VI:48W1

Plot numbers: 1 and 3

The site was recorded in 1932 by the Cyprus survey. In 1944 it was reported by Dikaios (Cyprus Museum). The finds were stone axes, and a pestle; chert flakes, chunks, and a chip; coarse, painted ware, red lustrous and red on white sherds (Stanley Price, 1979a: 119).

In 1971 Symeonoglu covered this site under his Phlamoudhi survey. According to him, Dikaios had visited the site a few times and collected many Neolithic tools. Symeonoglou found very little, a few flint chips and a few possible stone tools. He notes that no pottery was found (Symeonoglou, 1971: 90).

Following Symeonoglu, Stanley Price visited the site twice in 1972. He found sherds, flints and stone implements (Stanley Price, 1979a: 119).

6.4 1995-1997 Archaeological Fieldwork Areas

The geographical description of the north-east coast usually starts east of Kyrenia town. However, since Catalkoy village area was covered in the previous chapter, in this thesis it describes the sites that are located on the coastal strip east of Troulli. For the purposes of this thesis, the area description 'north-east' covers the villages of Tatlisu (Akanthou), Kucuk Erenkoy (also Akanthou) and Esentepe (Ayios Amvrosios) . At Tatlisu, two sites were surveyed systematically. The first is Tatlisu-*Ciftlikduzu*, the second is Tatlisu-*Kuyu Mevkii*; at Esentepe, a newly discovered site named *Agirsu (Green Peace)* was field walked, and at Kucuk Erenkoy the *Seslikaya* locality was field walked systematically. The results of these are in the following sections of this chapter.

The survey area started on the Famagusta/Kyrenia district border and finished at the lands of Tatlisu. The permit for this survey was given only for the Kyrenia district, yet the archaeological boundaries for the district departments do not start and finish at the modern boundaries but are defined according to accessibility. Although in Famagusta district, Tatlisu is actually accessible from and under the responsibility of Kyrenia district. However, survey beyond the village would have been counted under Famagusta and a new permit and representatives would have had to be arranged.

6.5 Esentepe - *Agirsu / Green Peace*

Site Code: GRP 97

Map reference: Cadastral XIII:15.W1; 1:5000 topographical S31 - a - 17 - b.

Plots surveyed: 9/4, 12/7/1/1, 12/7/1/5, 12/6/10, 12/6/11, 12/6/12, 12/6/13, 12/6/14 and 12/6/15.

Locality name: Agirsu

Survey method: field walking

Extent of site: 120 x 50m and probably more (according to surface scatter).

Recent land use: agriculture and natural.

Finds summary: Plots 12/6/15 and 12/6/16: axes (12); remainder of site: deer antler, pivot stone , grinders, quern. (Only axes and antler were collected) (figs. 3.97-3.100).

6.5.1 Site Location

The site is located on a coastal headland at about six to ten metres above the sea level. This site was temporarily given the name Green Peace after the nearby restaurant. This name and the abbreviation is used in the previous reports presented to the Department of Antiquities. The site's locality name is *Agirsu* and it will be referred to as Esentepe-*Agirsu* from now on. Esentepe-*Agirsu* was previously unknown and was discovered by H. M. Sevketoglu in 1996 (pers. comm.). In order to eliminate the possibility of this site being previously recorded, Stanley Price's gazetteer (1979) was checked. The only recorded site in this area was another coastal site named Ayios Amvrosios - *Alakati*, with a map reference XIII:19E:102. After a rough calculation it is estimated that the site is located approximately six kilometres west of Agirsu.

6.5.2 Survey Method

The north-facing part of the site has been sliced, probably by earth removing machines, showing structures and depth of the site in detail (Plate 1c). The visit to the site was organised in 1997 by the person who discovered the site as an outing rather than a planned survey. In the absence of my team I carried out restricted survey consisting of observations, photography, field walking and written records. I later took some aerial photographs (plates 1a, 1b).

6.5.3 Survey Results From GRP 97

The position of the site is shown on Map 9 and plates 1a and 1b. The section of the site looks very similar to that of Ayios Epiktitos-*Vrysi* yet no pottery was found. The architecture shows stone walls standing to a height of a metre or more, sometimes pairs of walls suggesting two buildings adjacent to each other. The structures appear to be two to three metres across, and one wall has evidence of a window or opening in it while another has a built "cupboard" at the base, both typical of features seen at Ayios Epiktitos-*Vrysi*. The pivot stone (plate 1c), which is not in situ, is also typical of those at Ayios Epiktitos-*Vrysi*. The lack of sherds both from the section and on the surface around the site is therefore extremely puzzling. There is very little to interpret from the surface scatter of stone items. Most of the ground stone observed was exposed by earth moving machines, therefore it is not in situ. In general however, the grinders (plate 1c), are similar to those from Ayios Epiktitos-*Vrysi* although they could also be Aceramic. The axe assemblage collected from the surface seems more similar to those from the Late Neolithic than the Aceramic period. They were spread widely across the undisturbed part of the site to the south. The deer antler was found in the soil washed near the sea.

6.5.4 Conclusions Concerning GRP 97

Agirsu is clearly a very important site, and the author is strongly inclined to date it to the Late Neolithic period despite the absence of pottery. However, it is not assigned to any particular phase of the Late Neolithic as this can only be done with pottery. The dating is made purely on the observations of the architecture exposed in the section and the ground stone, which are very similar to those of Ayios Epiktitos-*Vrysi*. as is the geographical location. It is also worth noting that the site appears to be a mound (see chapter 8 for further discussion).

6.6. Kucuk Erenkoy-*Seslikaya*

Site Code: KEK 95

Map reference: Cadastral XIV:2W

Plots surveyed:169, 170, 171, 173/1, 174/1, 180, 191, 161, 162, 163, 164, 165, 166, 167, 168, 185, 187, 188, 189, 180, 290, 291

Locality name: Seslikaya and Kucukduz

Survey method: systematic field walking

Extent of site: approximately 480 x 180m

Recent land use: plot 169 partially built on (small family-run restaurant called Eagles Nest); Plots 170, 171, 173, 174, 180, 185, 186, 187, 188/1, 189, 290 are cultivated for wheat and barley; Plots 161, 162, 163, 164, 165, 166 were used for growing vegetables, green peppers and aubergines

Finds summary: chipped stone (20), pottery (11), ground stone (8), axes (12), shell (1) (figs. 3.101-3.106).

6.6.1 Site Location

The site *Seslikaya* ("noisy rock") is located on a cliff not far from the main road between a stream on the west and a river, Kotu Dere, on the east (plates 2a, 2b). It covers a large area of cultivable land spread across two localities, *Seslikaya* and *Kucukduz* .

6.6.2 Interpretation of Finds From Field Walking Survey KEK 95

The area walked is shown on Map 10. There are no visible structures on the surface and a very small number of artefacts was found. Underneath the foundations of the restaurant, plot 172, a few Late Neolithic type sherds and some stone axes were found (figs. 3.101, 3.102, 3.105). In two areas concentrations of stone axes were found. These areas comprised plots 173/1 and 174/1; and plots 161, 162, 163, 164, 165, 166 and 186.

In the surrounding area Classical period ceramics and tombs are spread throughout the south of the site and the village. However, due to time constraints and the limited parameters of this research, the Classical period in the area was not researched. In the sea along the coast of the site it is said that amphorae from wreck sites are known. This was proven by some amphora parts displayed in the local fishermen's restaurants in the village .

6.6.3 Conclusions

Not many artefacts were collected from this site for any detailed distribution analysis. However, the artefact evidence was sufficient to confirm the existence of a site and for dating it to the Late Neolithic period. The geographical position of the site is also very similar to that of Ayios Epiktitos-*Vrysi* and Esentepe-*Agirsu* .

The site was visited with members of the Department of Antiquities and Museums in January 1997, for assessment in light of the 1996 survey report for consideration for the site to be protected.

6.7 Tatlisu (Akanthou)

6.7.1 The Village Name

The name Tatlisu was given to the village in 1975 when much of it was repopulated by Turkish Cypriot refugees from Tatlisu (Mari) village in Limasol district. The previous name Akanthou means thorny or the angathi thorn in Greek. The alternative names are Akantu or Akathu or Akatu, Acte Argivorium, Agathou, Komi, Kouphos and Akanthoy. The -thoy ending is a common mis-spelling of koy, village in Turkish.

6.7.2 Tatlisu - *Ciftlikduzu*

Site Code: TCD 96, followed by the trench number (T), mound number (M) or the plot number for areas field walked.

Map reference: Cadastral VI:45.W; 1:5000 topographical S 31-b-11-a, S 31-a-10-c.

Plots surveyed:176, 177, 178,179, 180, 181/1, 185, 186, 187, 188, 275, 276, 278, 279.

Locality name: Ciftlikduzu

Survey methods: Field walking and sample sieving from the spoil heaps

Extent of site: approximately 280 x 140m

Recent land use: protected coastline

Finds summary: chipped stone-chert (65), obsidian (20), ground stone (39), axes (9), shell (14), worked bone (2), animal bones (55) (figs. 3.107-3.128).

6.7.3 Site Location

TCD 96 is a large site with surface material spreading over an area of about 280 x 140m (see Maps 11 and 12). It is situated on a flat cliff about 10m high. To its east there is a sheltered bay and to the west there are rocky inlets (plate 3a).

6.7.4 Site Environment

There are fields on the west side of the site which are used for agriculture. On the south side of the site there is a chicken farm. The owners of the chicken farm have been dumping manure and entrails from the chickens outside their land which unfortunately happens to be on the site. These people also dug trenches across the site for burying the entrails and caused serious damage. These can be seen on plate 3b.

6.7.5 Survey Strategy

A day or two before our survey the owners of the chicken farm next to the site opened up a number of trenches of 2 x 1m wide and 1.5m deep on plots 176, 177, 178 and 179 for the disposal of chicken entrails. This was unfortunate; however, we took advantage of this situation to look at the sections which showed a depth of deposit of around 1.2m. One of the trenches, T1, revealed the section of a stone wall, which was drawn.

Three types of survey were carried out in the area. The first one was sample sieving of the spoil heaps; due to the small number of staff available and a tight schedule, samples of soil from the spoil heap beside each trench were sieved. These trenches were treated as if they were grids laid out over a site. Samples of equal volume of 50 litres taken from each trench spoil were sieved and the finds from them were recorded in the hope that they could be used for artefact distribution graphs. However, the numbers proved to be too low, so the data has been presented in the form of bar and pie charts (figs. 2.42-2.48). These do permit an understanding of artefact distribution on the site. The artefacts from the trenches were given numbers preceded by the letter T, and these numbers represent the spoil heaps belonging to each trench. The second method was the collection of artefacts from the surface of spoil mounds which were not related to the current set of trenches but had accumulated over the years. These artefacts were given numbers preceded by the letter M. The final survey type was systematic field walking of the surrounding area, shown in plate 3c.

6.7.6 The Distribution of Finds from TCD 96

The bar graph in figure 2.42 shows the types of artefacts collected from the spoil heaps of the trenches by number. There is a total of eleven types of artefacts in which the animal bones are included because they offer highly important information about the site. The artefacts and their number in descending order are: chipped stone (chert) (65); ground stone (38); animal bone (33); obsidian (20); shell (12); axe (8); worked bone (2); shell bead (2); chisel (1); stone bead (1); pendant (1). Figure 2.43 shows these as percentages of total finds.

6.7.7 The Chipped Stone - Chert (figs. 3.117-3.125)

The bar graph in figure 2.44 shows the distribution of all the chipped stone (chert) by location. The highest number was collected from the mounds of CE NE (Cliff Edge, North East) and the surrounding ground surface. This is not surprising since the area had many spoil mounds over a large area which must have been dug out over the past years. From the trenches, however, T4 has eight artefacts and T2 has six. The chert tools were very varied in type and size, as can be seen in figure 2.45, but were generally a blade-based industry.

6.7.8 The Chipped Stone - Obsidian (figs. 3.126, 3.127)

20 pieces of obsidian tools were found from several trenches, mounds and fieldwalking, and it was therefore in use over much, if not all, of the site (fig. 2.46). At least some of the obsidian came from the deeper sections of the site, since the dark soil colour at the bottom of the trenches was on the top of the spoil heaps and contained obsidian. As the mounds were large and represented many reworkings of soil it is not possible to say at what depth the obsidian from the mounds originated.

As can be seen from figure 2.47, the obsidian industry is dominated by blades but also includes flakes and chunks. This suggests that the obsidian was worked in situ (see section 6.8.11 for further discussion of this issue). Most of the obsidian came from the western part of the site with two concentrations, one at trenches T2, T3, T4 and T5; the other around T9, T11, M3 and M1.

6.7.9 The Ground Stone (figs. 3.107-3.113, 3.116)

39 ground stone items were found, 20 of them related to food processing (fig. 2.48). Of these, ten were querns, the remainder grinders, rubbers, mortar and a

pestle. These were concentrated at three parts of the site - the north-west cliff edge; the east, north of the track; and the west, south of the track. The tortoise-shaped stone grinders were present as at DKM 96 (see chapter 7). Of the other 19 items 8 were vessels, these occurred through out the site. As for the minor items such as polished pebbles, discs, incised or grooved stone, pendant/bodkin etc. they occurred throughout the site in small numbers.

6.7.10 The Axes (figs. 3.114, 3.115)

There were not many axes from this site and the ones found were mainly from plots 186-8 and 279 (four axes), and from the mounds near the cliff edge (three axes). Only one axe was found on the surface near T1 and a picrolite chisel fragment was found in T19.

6.7.11 The Animal Bones

55 animal bones were collected, as it became clear during the survey that deer was present, and 33 samples were identifiable to an extent. All the bones were examined firstly by Dr. Nicola Murray of Edinburgh University. In addition to the normal repertoire to be expected from an Aceramic site, she identified two cattle bones. The presence of cattle in a pre-Bronze Age assemblage in Cyprus was extremely surprising; therefore the writer asked Dr Louise Martin of the Institute of Archaeology, London for her opinion. She submitted a report which can be seen in Appendix F. Dr. Martin also identified two cattle bones, a finding which was later confirmed by two other bone specialists, Dr. Sebastian Payne of English Heritage and Dr. Simon Davis. One cattle bone has cut marks which appear to have been made with a stone tool possibly from skinning - the results of analysis are awaited. The species of cattle involved has not yet been determined, but it is unusually small with some atypical features, and is definitely not modern.

The deer antler were found in good condition. Fallow deer is definitely present, and it is possible that another deer species is also represented. Sheep/goat and pig/boar are also present.

The animal bones come from T1, T2, T3, T4, T5 and M3. This distribution is very interesting because it is largely confined to one part of the site - the extreme west (T1-5). Eight of the obsidian pieces came from the same trenches, as did 16 pieces of chert. Bone in M3 was also associated with chipped stone - six pieces of obsidian and one of chert from the same mound, and four pieces of obsidian and one of chert from adjacent trenches and mounds. This is unlikely to be an accidental pattern, as almost all the remaining chipped stone came from field walked areas and very little from trenches and mounds.

6.7.12 Other Finds (fig. 3.128)

In addition to the artefact types discussed above there were other items from the site which deserve to be mentioned. These were a stone bead, pierced shells, a green stone pendant or bodkin and worked bones. Similar items, if not exact parallels of form or material, are known to be present on other Aceramic sites. There is also a picrolite chisel fragment (fig. 3.128-c) from T19.

6.7.13 Conclusions Concerning TCD 96

It was hoped that the artefacts from the trenches would give a distribution pattern similar to that from a gridded surface survey. On the whole this proved successful. The chipped stone is confined to certain areas, some of which coincided with the area where animal bones were concentrated. The ground stone was also found in restricted areas which show very little overlap either with chipped stone or with animal bone. The grinding equipment is confined to two areas which do not overlap with other artefact groups. Similarly the axes were found in discrete areas of the site or on the periphery. This suggests that the rather unorthodox methods used on this site as a result of the disturbance caused by others did lead to the detection of patterns similar to those found in grid survey on other sites.

From some materials found at TCD 96 it is possible to establish contacts within the island and abroad. The source of the picrolite chisel fragment is known to be in the south-west of the island. The obsidian, on the other hand, is not native to Cyprus and must have been brought across the sea. There has been some debate about obsidian acquisition and distribution throughout the island. It has been suggested by Peltenburg that Klepini-*Troulli*, a coastal site to the west of Tatlisu, was the distribution point for obsidian (Peltenburg, 1979c). This was due to the large amount of obsidian found at *Troulli* - 24 pieces, which was the highest number known from any site at the time. Since then Kalavasos-*Tenta* has produced 35 pieces and the excavator, Ian Todd, has questioned Peltenburg's suggestion, particularly in light of the low occurrence of obsidian at Khirokitia-*Vounoi* which is the largest site of the period and is close to Kalavasos-*Tenta*. The recovery of 28 pieces at Tatlisu-*Ciftlikduzu* only from surveys and superficial sampling (20 from the 1996 survey and 8 from previous survey), and the fact that obsidian constitutes 30% of the chipped stone collected during the 1995 survey, should make us reconsider again the movement of obsidian into and around Cyprus. It is generally thought that ready-made blades were imported to the island (eg. Todd, 1986: 16) but Todd pointed out that the lack of other tool types common on the mainland was strange. The presence of obsidian flakes at Tatlisu-*Ciftlikduzu* means we need to reconsider these ideas . This reassessment could include the uses of obsidian in the economy - for instance, this may explain why Cape Andreas-*Castros*, which seems to have relied heavily on fishing, had a low incidence of obsidian. The suggestion that obsidian was worked in Cyprus rather than being imported as ready-made tools finds support in the recent discoveries at Parekklisha-*Shillourokambos* in the south of Cyprus near Amathus (Guilaine, 1995; Briois, 1997). 217 pieces of obsidian have been found on this site, mainly blades but including other tool types. All obsidian found in Cyprus which has undergone analysis has been shown to originate in central Anatolia. Almost all the obsidian tested from Parekklisha-*Shillourokambos* came from Gollu dag, from the Komurcu and Kabaktepe sources (Briois, 1997: 108-110). No tests have yet been carried out on the obsidian from Tatlisu-*Ciftlikduzu* , but there is little doubt that it is also from central Anatolia.

TCD 96 is clearly an important site, because of the large amount of obsidian found during a survey and more especially the cattle bones that were found. The recent discovery not only of large amounts of obsidian but also of cattle bones at the site of Parekklisha-*Shillourokambos* , reports of which began filtering through soon after the survey at TCD 96 was carried out, supports the findings from TCD 96 strongly and emphasises the importance of the site. The presence of cattle at Parekklisha-*Shillourokambos* has recently (summer 1998) been announced as confirmed. The early dating of this site, with suggestions that the settlement was established perhaps 500 years before Khirokitia-*Vounoi*, is extremely exciting and has implications for the dating of TCD 96 (Guilaine, 1995; Briois, 1997). The apparent architectural development at Parekklisha-*Shillourokambos* from flimsy structures to classic Khirokitia culture buildings suggests the indigenous development of the Aceramic culture of Cyprus rather than its importation and conservative stagnation as has frequently been suggested. In this context, the importance of TCD 96 can hardly be over-emphasised, and its further exploration is a matter of some urgency.

Despite the extensive damage to the site from trench cutting and the layer of chicken manure, it is thought that parts of it remain undamaged and suitable for excavation. It was revisited in January 1997 by staff of the Department of Antiquities for the assessment of steps for its protection. The land the site is on was protected land owned by the government, and the trenches on the site were dug illegally. After the official visit of the Department of Antiquities, legal action was taken against the person who dug the trenches on the site. The owners of the farm and the Department of Antiquities staff were previously unaware of the existence of the site.

6.8 Tatlisu - *Kuyu Mevkii*

Site code: TKY 96 followed by the grid number.

Map reference: Cadastral VI:48:W1

Plots surveyed: 1 and 3

Locality name: Kuyu Mevkii,

Survey method: 5 x 5 metre grid survey and total collection.

Extent of site: 45 x 115m

Recent land use: abandoned agriculture.

Finds summary: chipped stone (1679), pottery (43), ground stone, (16), axes (11) and shell (2) (figs. 3.129-3.140).

6.8.1 Site Location

The most easterly site surveyed in the 1995 and 1996 seasons, this is a small seaside settlement. The site is on a coastal plain with gently undulating land extending from the first bare raised beach rock by the sea to the nearest elevated land (plates 4a, 4b). The inclination of the land is moderate. The landscape features are abrupt, with a beach to the east and rocky raised land on the west. To the east on the long sandy and pebbly beach there is a fresh water well which was functioning in the summer months to water the animals. Hence the locality name Kuyu, as both Lakkous and Kuyu mean "well". Although very close to the beach, this well did not seem to be contaminated by sea water. The approach to the site from the road is over a slight slope which is composed of settlement debris (see section 8.3.4 for discussion of tell sites in Cyprus). This can be seen on plate 4c, which is taken facing north, with the sea hidden by the rise of the mound.

An interesting feature is a tunnel running under the site from the sea. This tunnel was not visible from the land but when cooling off during the hot days of survey, the author noticed and swam around this tunnel which actually had two different entrance holes to it. In 1973 Dr. Flemming and his team established the existence of a 20 metre long cave underneath the central part of Ayios Epiktitos-*Vrysi* settlement. These caves are explained as sea action dissolving and weathering aeolianite and calcite, which makes up the geology of the headland. Besides causing collapse of the rocks, it could create these caves (Peltenburg, 1982: 9). The caves in both these sites can be explained as a result of having a similar geology and as coincidence, rather than some significant man-made similarity.

6.8.2 Vegetation and Recent Land Use

The top soil in this area is shallow and the vegetation cover is variable. To the north-east vegetation is heavy while on the west and south it is sparse. There is some soil erosion south of the site where soil has been taken to build the dam. At one time fresh water flowed to the beach on the north side, incising a stream bed 2.23 metres deep into the sandstone. There is no occurrence of soil deposition on the site. Artificial alteration of the site itself and the area south of the site where geometric pottery was found occurred as a result of bulldozing for roads and dam building (plate 4b). On the site there was an abandoned wheat field. The owner was given this land in compensation for land he lost due to the dam project. He claims that the soil is too shallow for agriculture and is infertile; he tried it once that year but was not successful and so would not try again. The soil is light brown in colour; it has no loose stones as such to be called a stony field but the soil is shallow. West to north-west of the site is completely bare rock. The vegetation cover consists mainly of thistles and some weak crops of about 0.5 -1m tall. It is abandoned infertile land useful only for occasional grazing. The only possible resources on this site could have been the sea for fish, pebbles on the beach for making stone tools, and on land the sandstone which was useful as a building material. It is the main communication route for the area and currently has a single track tarmac road.

6.8.3 Artefact Distribution at TKY 96

The area walked can be seen on Map 13. Of all the materials and their distribution, chert is the most interesting. Towards the western edge of the site there are groups of high density chert distributions that could be interpreted as chert knapping work areas. There is very little pottery from the site and the diagnostic sherds are red painted pottery similar to that from Ayios Epiktitos-

Vrysi. Amongst other finds, complete axes and other ground stone tools were collected.

6.8.4 The Chipped Stone (figs. 3.135-3.139)

There is an unusually high number of chipped stone items from this site. The overall chipped stone distribution on site is clearly defined and concentrated to the west of the site (figs. 49a, 49b). When studied in detail, an isolated concentration of chert at west-centre and two other concentrations at the north-west and south-west corners of the site are clearly visible. When examined by weight, chert is seen to be spread more widely over the site (figs. 50a, 50b), but the extreme north-west corner still has the highest density. Around the south-east, south-centre and north-centre the light blue defined areas stand out as small in number but bulkier in weight.

An explanation for the concentration of chert could be that the north-east area was mainly used as chipped stone work areas. When compared with the concentration of hammerstones that are used in splitting the chert cores for making tools, it is noticeable that the locations of both artefact types correlate in distribution. Since they are expected to be used together, and they are found in the same area, the post-depositional processes that could upset the patterns of artefact scatters on site may perhaps safely be disregarded (see section 6.8.8). However, it is important to remember that chipped stone concentrations in Cyprus may not be prehistoric, but may be the result of making blades for threshing sledges. Although the presence of other prehistoric artefacts on the site, range of tool types and the number of recognisable tools, makes it reasonable to assume that the chipped stone is also prehistoric, the present author is not qualified to distinguish prehistoric from relatively modern material, and therefore specialist examination is required.

6.8.5 **The Pottery** (fig. 3.140)

The number of sherds collected was very low, as can be seen in figures 51a and 51b. Nevertheless, one can clearly see a spread of sherds radiating from the extreme north-east corner of the site. When examined by weight, the highest concentration is still in the extreme north-east, but the general spread across the site suggests that although scarce, the sherds on the main body of site are larger and/or heavier (figs. 52a, 52b, 52c).

6.8.6 **The Ground Stone** (figs. 3.129-3.130)

The number of ground stone artefacts at this site is extremely low, too low to carry out a meaningful computer-generated distribution analyses. However, the distribution of the ground stone artefacts by type and number can be seen from the table in figure 53 . It demonstrates clearly that a distribution pattern exists, with the grinders in the north-east centre area, within lines 7-10 and spread across the whole width of the site; the pecked stones (hammerstones or pecking stones) in the north-west area, confined to grid squares 16-19 C/D: and the axes in the north-east area, mainly lines 1-8, A-C with a couple of outliers. Other ground stone artefacts such as whetstone, polisher, vessel, pounder and the pierced stone occur in such low artefact quantities that no distribution analysis can be made.

Figures 54a and 54b show the density of ground stone distribution by weight. There is a broad band of high density running roughly north-south with two very high points. On the extreme east-centre there is another spot of fairly high weight density. The distribution of ground stone by number and weight when compared does not show much difference. When the condition and type of artefacts is analysed, it becomes clear that the weight distribution is related to these aspects.

6.8.7 The Axes (figs. 3.131, 3.133, 3.134)

The distribution of axes is concentrated in the areas of lines 1-4 B and 4C. Grid 6A and 8B. There are only two isolated axes, one in grid 21C and another in grid 6F. There is a clear distribution pattern of axes especially on the top north-east corner of the site.

6.8.8 Conclusions Concerning TKY 96

There are separate areas of concentration for different artefact types. The sherds and stone axes are the closest in terms of area distribution. Some chert is found in the same north-east area and two ground stone artefacts are found close to it. In this area, the north-east, there is a concentration of several artefact types. The interpretation of these artefacts concentrating in the same area could involve considering the post-depositional processes; and the afore-mentioned visible structures on the site that represent part of the settlement.

The post-depositional processes that can be traced are, ploughing, building on the north east edge of the site, human and animal activity such as walking, grazing, moving soil by machinery, and the natural causes like rain and wind washing off the top soil or washing down soil on to the site from the slopes to the south. It is not likely that this site was ploughed every year for centuries because the soil is infertile and not deep enough for the growth of healthy plants. Therefore it is not through plough action that certain artefact types are concentrated in clearly identifiable areas.

From the artefacts the site can be dated to the Late Neolithic period, although the pottery from this site is not as common as expected, especially the painted sherds. The Late Neolithic site of Ayios Epiktitos-*Vrysi* shares certain geological characteristics with TKY 96, such as the tunnel running under the site (mentioned above 6.9.1). This site also has other similarities with Ayios Epiktitos-*Vrysi* in terms of site location including the existence of a beach and small bays. These similarities suggest that TKY 96 could also have been built in the rock like a reverse tell site as it was at Vrysi, making it a subterranean settlement on which it is expected that erosion and other post-depositional processes have different effects from an open site. However, only excavations will reveal this. The most striking feature is the most fascinating one, namely the long tunnel that goes under the site from the sea.

Field walking immediately south of *Kuyu Mevkii* on the other side of the road, geometric period pottery and various late period sherds were found but not collected. On the north-east corner of the site, near the Mediaeval store house, faint circular stone structures were visible, which I hope are Neolithic.

Chapter 7

Survey of the South Face of the Kyrenia Range

7.1 The Geology and Land Formation

The sites in this chapter are located on the south facing skirts of the Kyrenia range. Like the north face, it has abundant spring heads at which villages are found. Two of these are famous - the first is at Pinarbasi (Kirni, Krini) the second at Degirmenlik (Kythrea). These large springs obviously give way to other smaller springs in the vicinity. Both these main springs were in use during the childhood of the author, who visited them on family outings or school trips, but now they are both completely dried up. The two areas of survey that will be discussed in this chapter are centred on these two springs. The first area is the land between Pinarbasi (Kirni) and Goceri (Pileri) villages; the second area is further east around the village of Degirmenlik (Kythrea).

7.2 Vegetation and Recent Land Use

The south face of the mountains has sparse vegetation and forest. It has a dry look yet when one actually starts to walk around one realises how much thorny shrub (*shingya*) there is. Trees like olive are rare, citrus is non-existent. Eucalyptus and plane-tree are common near the large springs, planted for shade. General land use in the area is dry farming, grapevines and animal husbandry. (See also section on vegetation in chapter 1)

7.3 Research in the Area of Goceri (Pileri) Village

7.3.1 The Village Name

The Turkish village name Goceri means pass, transfer, cause to collapse or to cave in. It could be derived from Gocyeri, meaning a migration place. Other examples of "yeri" ("the place") changing in this way are known, and in the spoken Turkish Cypriot dialect, dropping the sound of "y" is common. According to Goodwin the first inhabitants of the village came from the adjacent village of Blessia, abandoned in the late Middle Ages (Goodwin, 1985: 1393), a suggestion which strengthens the possibility of Gocyeri as an earlier form of Goceri. The name Goceri has been in use since the Ottoman period in Cyprus, as Goodwin refers to it as 'not new'. The alternative name Pileri is suggested by Goodwin to be Frankish in origin, a corruption of "pilier", or possibly derived from the Greek "pilerka" (meaning stone pillars supporting the cross bar of a well). However, the name Pileri does not occur on early maps, and the "i" ending suggests a non-Greek origin.

7.3.2 History of Research in the Area

Between 1955 and 1959 the Cyprus survey led by Catling surveyed the village lands of Goceri. A total of seven sites was recorded, six of which are settlements and one a cemetery site. They are listed below with site name, period and six digit co-ordinates as given by Catling:

No 124 Pileri *Kafkalla* - Cemetery - EBA - 916808

No 125 Pileri *Ak Punar* - Settlement - EBA - 913813

No 126 Pileri *Koja Belenk* - Settlement - EBA - 915816

No 127 Pileri *Shimshirlik* - Settlement - EBA - 917818

No 128 Pileri *Touroushlu Sou* - Settlement - EBA - 896830. (Catling, 1962:153)

No 139 Pileri *Inonu* - Settlement - MBA - 902812. (Catling, ibid, p.159)

No 209 Pileri *Inonu* - Settlement - LBA - 902812. (Catling, ibid, 168)

Stanley Price mentions only two of these in his 1979 gazetteer, and adds a third which is absent from Catling's list. His information is as follows:
Pileri - *Profitis Elias Pyrgos ,* Cadastral map reference XII:33E1:16, recorded by the Cyprus Survey in 1959 with finds of one axe and other tools. Not visited. (Stanley Price, 1979: 114). It is possible that this site is the same as Catling's *Agia Marina-Prophitas Elias*, settlement?, visited in 1952. (Catling,1962: 149).
Pileri - *Shimshirlik,* Cadastral map reference: XII:41W:128. In 1959 the Cyprus Survey had recorded finds of stone tools. Not visited.

Pileri - *Koja Belenk*, Cadastral map reference: XII:41W:70-1. The Cyprus Survey collected many axes, a few adzes, handstones, grindstones; many flakes, a blade and a chip; the pottery was red lustrous/polished ware, red on white, polished ware and coarse/coarse red. Visited in 1971. (Stanley Price, 1979a: 114-115).

7.3.3 1996 Field Survey at Goceri

Of the sites previously recorded, only two were visited for the current survey. Due to the large size of Goceri and the time it took us to survey the major site at *Koca Belenk,* we had to postpone the survey of its vicinity to later years. Many of the sites, although recorded separately, are probably part of the same site or shifting and drifting patterns of settlement. In order to establish this, further research - preferably excavation -is necessary, because there is insufficient surface material to help assess this by intensive surface collection by means of 5 x 5m grids.

Shimshirlik locality was visited in 1996, but the only surface finds were some chipped stone flakes. A grid survey with total surface collection was carried out at the *Koca Belenk* locality, and the results are given in detail below.

7.3.4 Goceri-*Koca Belenk*

Site code: GKB 96 followed by the grid number.

Map reference: Cadastral XII:41W:70-1; 1:5000 topographical S 30-a-25-a, S 30-b-25-b

Plots surveyed: 70

Locality name: Koca Belenk

Survey method: 5 x 5 metre grid survey

Extent of site: 145 x 125m gridded; site extends further

Recent land use: agriculture

Finds summary: chipped stone (1,970), pottery (10,895), ground stone (230), axes (105), boar's tusk (3), antler (1), picrolite (1), figurine (4) (figs. 3.141-3.213).

7.3.5 Site Location

Goceri - *Koca Belenk* is situated on a plateau east of the village. The plateau is visible from the track road that lies east of the village, and is accessible through the fields north-east of the village mosque or the school. The site's location caught the author's attention before any attempt was made to relocate it with maps. It is in the foothills of the mountains on a reasonably hilly site with abundant water sources, and stands out as an obviously favourable settlement location. Although very different from the coastal settlements on the north coast, it resembles the location of the site at Edremit.

7.3.6 Site Environment

The *Koca Belenk* plateau is a large area of elevated land with a moderate slope to the east and south and a steep inclination to the north and west. There is an abrupt change in morphology of the landscape in all directions. To the north the Kyrenia mountains start a steep climb, to the south land stretches out to the flat Mesaoria plain, to the west is a built up area, the village, and to the east is a series of streams, valleys, slopes and plateaux and sharp spurs and ridges. Water sources include springs to the north, at the foothills of the mountains, and perennial streams around the east end of the site. The vegetation cover is sparse and soil erosion is visible on the slopes around the site. This could have linked causes; firstly, ploughing; and secondly, sudden floods of rain which wash away the surface of the ploughed soil which has no retaining vegetation cover. The only human modification on the site is the ploughing and probably fertilisation that may occur rarely. The soil is dark brown in colour, of good depth with few stones. The vegetation in the surrounding area consists of sparse patches of shrubs called batha, which gives the impression from the distance that the area is bare ground. This is the case for most of the southern face of the mountains until Alevkayasi forest (Halefka). The flat land in the area is used for intensive cereal farming. The land capability is good arable land for dry cereal farming and enough natural vegetation for grazing.

7.3.7 Survey Strategy

The first impression of the site was that there was little surface scatter on the field. A random walk on the site resulted in the discovery of a Chalcolithic nipple-type base. This find was important because the site was recorded originally as Early Bronze Age. In order to establish whether Chalcolithic material was present in quantity, a grid survey was chosen, despite the apparently low density of surface scatter compared to other sites surveyed. Once the grid was laid down and collection started, the low density theory was shown to be wrong. The intensive total surface collection resulted in finding many surface artefacts that could not have been discovered by systematic field walking and could not catch the eye. The 5 x 5 metre grids were first laid on the eastern part of the field which was conveniently separated by a thin and low line of stones and bushes. The other important factor for dividing the site into two parts was that the eastern side of the field was ploughed and the western part had recently been harvested. This provided a good base for analysis of a site with each half treated differently . However, to avoid complicating or separating the site once the eastern sector was surveyed, grids were extended to the west of the field and continued with the next line number that was used last in the east sector. Therefore, the east sector has line numbers 1 to 25 and the west sector has 26 to 50. The square numbers ranged from 13 to 15 in each line which meant a total of 725 squares was walked and collected in an area of 145 x 125m. There were many ground stone tools on the slopes of the plateau ranging from pounders to grinders and querns. These had probably rolled down encouraged by the natural cause of erosion, or had been moved and ploughed off the flat part of the field by the farmers who used the field from the days of the wooden plough to the present day. These were not collected, as there was insufficient time to carry out a grid survey beyond the plateau itself.

7.3.8 The Artefact Distribution at GKB 96

Goceri-*Koca Belenk* is a site rich in artefact types and numbers. As mentioned in previous parts of this thesis, the number of artefacts is an important factor in producing successful density of surface scatter graphs by using the mapping programme. The huge number of artefacts collected at this site - more than

13,000 - meant that a wider range of scatter graphs could be attempted, with very interesting results.

7.3.9 The Chipped Stone (figs. 3.161-3.175)

The Chipped Stone distribution by number has a very clear high spot on the north-east corner of the site, grids 4-8 F-K (figs. 55a, 55b, 55c, 55d). There are three other high concentration areas at grids: 38-41 C-G; 36-38 A with 11-13A and B; and 14-16 E-H. In comparison, the distribution of chipped stone by weight gives very contradictory results (figs. 56a, 56b): the high point switches from the north-east corner to the north-west corner; there is also a smooth distribution on the entire eastern end of the site. This difference can only be explained by a difference in artefact type . To examine this further, certain types of chipped stone have been compared to the distribution of chipped stone as a whole.

There is a clear similarity between the distribution graphs of all chipped stone by number and the distribution of the chipped stone "chips" (figs. 57a, 57b). Both have the highest number in the north-east corner. This shows that in number, "chips" are in a majority compared with other chipped stone types. On the other hand, when the general distribution graph by weight is viewed alongside that for chipped stone "balls" (figs. 58a, 58b) one can see that the "balls"- which are heavier than other types of chipped stone artefact, weighing on average around 100g each - are clearly represented in the chipped stone by weight distribution graph. Thus those areas of weight density that show a pattern of 200-220g of chipped stone correspond to squares where two "balls" were collected. The remaining tool types, on the other hand, are spread in the centre of the site as well as corresponding to the high peak of the chipped stone by weight in the north-west corner of the site (figs. 59a, 59b). This shows that the tools in this part of the site are larger since they are not so high in number but are high in weight.

The distribution of the chipped stone by number of certain artefact types shows results which one way or another correspond with the number or the weight of the chipped stone. This result clearly proves how useful this kind of analysis is. These different locations of distribution are significant for suggesting certain specialised work areas within the site. It could be said that the hammering work was all carried out where the chipped stone balls were found. They are not widespread on the site. The chips are also condensed mainly in two parts of the site, which shows that the chipping or retouching is all done in specific areas. One area of "chip", the centre, overlaps with the mixed tool types, perhaps suggesting retouching of tools on the spot in a work area.

7.3.10 The Pottery (figs. 3.176-3.211 and Appendix G)

The number and variety of pottery sherds from GKB 96 was very rich. (A selection of the thousands collected has been illustrated, and Appendix G gives details of those shown as rim profiles.) This richness permitted the creation of distribution graphs for several specific ware types in addition to the graphs of the complete assemblage used for other sites. These ware types were only a selection of the ware type groups that are listed in Appendix D. They were selected for a range of reasons - from the most common types, wares that have parallels with material from excavated sites, and rare pottery wares. The long descriptions and many divisions of pottery ware types proved to be correct when the final result was on paper as a distribution graph, and the comparison of ware type and their distribution patterns shows many potential aspects of this type of work which could be extended to periods as well.

The distribution of pottery by number shows very interesting distribution patterns. There are several sherd concentration areas which are of significant size. As can be seen from figures 60a and 60b, the peak parts of these areas can be as large as 25 x 30m, while the smaller ones measure 15 x 15m. When the gradual decrease of the pottery between the main foci is also calculated, it is very clear that the main area of pottery distribution is widespread in the centre of the site within the boundaries of the natural plateau. This suggests that movement of pottery by plough action is not being observed here since the sherds are showing hot spots within areas with a general low-level spread of sherds. Another point that needs to be made here is that the western part of the site (to the left from grid line A) was not ploughed whereas the eastern part of the site(to the right from grid line A) was ploughed when the survey was carried out. It is usually expected that the ploughed fields should have more sherds, yet the unploughed part of the site shows more sherds without affecting its areas of sherd density concentration.

The distribution of pottery by weight shows hot spots in the same areas as those obtained when measured by number, although spread in a rather smaller area (figs. 61a, 61b). The maximum weight of sherds is above 950g; the maximum area of spread at hot points is 20 x 15m. There seems to be an overall distribution of sherds with many foci.

When the distribution of bmoc ware is compared with the total distribution of sherds by number, it can be observed that the high-points of density occupy some of the same areas, suggesting that bmoc contributes heavily to the overall distribution pattern (figs. 62a, 62b). This could be explained in a number of ways: that the bmoc ware is more common on the site than other ware types because it was the last or first stage of occupation on the site; that the settlement used bmoc ware more than other wares at one stage; or that bmoc ware was used in many stages of the settlement; that the stage that used bmoc ware was a longer settlement period than the other periods; or that bmoc ware is used at the period when the production of the large vessels in this ware was common, resulting in greater sherdage than from small vessels of other wares. If this last were true, the areas representing bmoc ware could be areas where large buildings with a storage function stood.

The next ware type is bcp ware. This shows a very tidy distribution, with only one main hot spot and a tiny area in the north-west corner (figs. 63a, 63b). The area where this pottery is concentrated is actually large enough for a small settlement, as it measures roughly 40 x 30m. This concentration of a ware type could be again related to a specific type of vessels made of that ware and kept in a particular part of the settlement, or to a certain phase or period in the lifetime of the site.

The coarse ware, perhaps surprisingly, gives similar results to other wares. This ware also appears in condensed areas, with two small areas of hot points (figs. 64a, 64b). These like other ware types could represent specialist areas or work areas - in the case of areas where the cooking was carried out (since coarseware is mainly related to cooking), then again it could represent a different period or phase of the settlement.

The bm ware has a very clear distribution, as shown in figures 65a and 65b. It is exclusively in the western section of the site and in several foci. On a large site such as Goceri, it was expected that the settlement would shift, and here it is apparent that there is a shift in the usage of the site. In fact all the ware types could represent constant shifting of the settlement.

Pottery analysis is not the main aim of this thesis, but these preliminary attempts have been so successful that further research will be carried out at a later date about the different ware types and their distribution, to see what other information can be gleaned from them which might shed light on settlement organisation. For instance, if the different areas of ware distribution belong to the same period, then it is possible that individual households with their specific pottery wares are showing up on the distribution graphs. If the pottery were studied by experts who could date the pottery closely and examine sherd distribution based on dating, the results might well be as interesting as the ware types. In fact, since archaeologists separate the ware types according to the period, what we see here with the distribution of the ware types is relevant to dating. However, at present we cannot be sure of the exact dates but only relative dates.

7.3.11 The Ground Stone (figs. 3.141-3.159, 3.212)

The maximum number of ground stone artefacts per grid square is four, shown as yellow hot spots in the distribution diagram. Therefore the number scale "above 2" shown on the figure actually represents a range of three to four. There is a very clear definition of the areas of high concentration of artefacts (figs. 66a, 66b, 66c). There are five hot spot areas: two of them are small, one in the north-east corner of the site and the other in a west-centre position. These two areas have two implements in each of their grid squares. The other three areas of concentration are considerably larger: the first is on the west of the site and spreads just over a 25 x 25m area; the second, working clockwise to the north, measures just over 20 x 20 metres. Both these areas have a similar shape of spread; the third area is in the north-eastern part of the site and is more tidy than the other two locations in terms of spread. It measures 20 x 15 metres. Besides these areas of high density, there are ground stone implements spreading all around at a lesser density (shown in green), with the south-east corner showing a lower density still, and a total absence at the extreme south-west.

The distribution by weight shows four hot spots, as seen in figures 67a, 67b and 67c. Two of these, in the west and north- west, match with the areas of high density by number. The other two, at the east and the south-west edges of the sites, do not coincide with a high number of ground stone artefacts, suggesting that a few very heavy items were found in these areas. It is worth pointing out that on the south-west of the site where artefacts by weight are shown, there is a wide spread after the hot spots shown in orange and red. These spreads are artificially made by the computer programme when interpolating (see section 3.21), and one has to be aware of it when interpreting.

7.3.12 The Axes (figs. 3.160-3.165)

The distribution graph of axes by number shows a maximum of four axes in high concentration points, with three as the average (figs. 68a, 68b). However they spread over a large area gradually diminishing in number down to two outwith the "hot spot" areas. These spreads, for instance at grids 33-37 O-G, can extend over an area of 20 x 45m. A second large spread is at squares 40-46 A-G and a third area is at grid squares 31-34 A-C, 6-8 A-C. As well as these there are areas of high concentration at grids: 25A and B; 36C and 37D; 9-11 D-E; 28O; and 28E. The high concentration points, large or small, are located mainly in the central part and at the edges of the site. When the distribution by weight is considered, the situation shifts to the western edge of the site, creating a new area of concentration centred on squares40-42 O-N and surrounding grids, with reduced central concentration points, and another new area in the north-east corner of the site (figs. 96a, 69b). This sudden shift can be explained as due to the condition of the axes. Naturally a complete axe is likely to weigh more than a fragment. This can be taken further, to suggest that the differences between the two graphs also show the concentration of the axe fragments (in the case of axes by number) and the concentration of complete axes (in the case of axes by weight).

7.3.13 Conclusions Concerning GKB 96

GKB 96 could be one of the most important prehistoric settlement sites in Cyprus. Located at a relatively high altitude, it was easy to keep an eye on the movements in the distance. To the south, towards the Troodos mountains, and the plateau hills of Philia, and to the west visibility is very good. From the top of the pinnacle hills at the cemetery site, the eastern part of the island is clearly visible. To the north there is easy access through the mountains to the coast. Knowing where the other prehistoric sites are, one can easily pick up bearings on the terrain and by simply walking towards them you get from one site to another. This could be the way prehistoric people travelled, and if so, GKB 96 may well have been one of the crossroads, connecting the central and southern parts of the island to the north coast.

Surveying GKB 96 (whose name means "large plateau") was a massive task as it is a big site, as the name suggests. However, it was very rewarding. As mentioned earlier, the site was originally thought to be Bronze Age (Catling, 1962 and Stanley Price 1978). Since then, research on the Chalcolithic of Cyprus has increased our knowledge of this period and its cultural material. Because of this we are able to review the date of GKB 96, which should now be re-assessed to include the Chalcolithic period for several reasons.

Four figurine fragments were found, all typical of the Chalcolithic tradition familiar from the south-western sites. The figurine head (fig. 3.182-5J) is made with a mixture of fine and coarse clay. Unfortunately only the neck and head survive. It is of the typical Middle Chalcolithic cruciform figurine type. Examples are known from the south-west of Cyprus in picrolite and sandstone. The so-called Lemba Lady from the Chalcolithic site of Lemba-*Lakkous* provides the closest stylistic parallel (Peltenburg 1985d, fig. 81). The GKB 96 figurine leg has its closest parallels at Kissonerga-*Mosphilia* (Peltenburg 1998, fig. 85, 9 is most similar). The other two fragments from GKB 96 - which probably belong to the same figure - appear to be part of an anthropomorphic vessel (fig. 3.182-10K), and are generally within the Chalcolithic tradition known from south-western Cyprus.

A picrolite pendant was also found at the site (fig. 3.212-10G). This material is very closely associated with the Chalcolithic period in Cyprus, although it has also been found on a number of Aceramic sites.

GKB 96 has many different varieties of pottery. These include much of the common repertoire of the Chalcolithic periods with parallels from almost every known Chalcolithic site in Cyprus regardless of its phase. The omphalos bases (fig 3.210) are known to occur in phases of both the Late Neolithic and the Chalcolithic which makes dating problematic. However, there are some Late Neolithic sherds at GKB 96 which suggests that there was some Late Neolithic occupation at the site. There is also some pottery with painted designs that are unknown elsewhere on the island so far as I can ascertain, and whose date is therefore not clear. The presence of some red stroke burnished sherds of the "Philia" type imply that occupation extended into the Late Chalcolithic/start of the Early Bronze Age as well. There is some hard fired red monochrome pottery of Early Bronze Age, which pushes the potential dates of this site between ca. 4000 - 2500 BC.

The material assemblage gathered during the survey suggests therefore that this site may hold the answers to a lot of questions regarding the Late Neolithic to Chalcolithic transition and Chalcolithic to Early Bronze Age transition periods in Cyprus. Excavations here in the future may provide important information regarding the sequence of the Chalcolithic periods, whether the Chalcolithic culture in Cyprus was a homogeneous one, and to what extent there was contact between different parts of the island at that time; as well as data concerning the transition period from the Late Chalcolithic into the Early Bronze Age and how closely these two periods are in fact related.

7.4 Research in the Area of Pinarbasi (Kirni, Krini) Village

7.4.1 The Village Name

The village name Pinarbasi, meaning head of a spring, dates back to the Ottoman period. The other common name for the village is Kirni or Krini, meaning spring. Both are in current use and have been for some time. Alternative names are Crini, Grini, and Kreni.

7.4.2 History of Research in the Area

Between 1955 and 1959 the Cyprus Survey led by Catling surveyed the village lands of Pinarbasi. A total of ten sites was recorded, four settlements, five cemeteries and a fortress. These sites were all recorded as belonging to the Bronze Age. The site name, period and six digit co-ordinates suggested by Catling are as follows:

No 71 Kirni *Merra* - Settlement - EBA - 937818

No 72 Kirni *Merra* - Cemetery - EBA - 935818

No 73 Kirni *Merra* - Settlement - EBA - 935817

No 74 Kirni *Rousoulli* - Settlement - EBA - 937816

No 75 Kirni *Kirmizi Beleuk* - Settlement - EBA - 939821

No 76 Kirni *Merra* - Cemetery - EBA - 937820

No 77 Kirni *Merra* - Settlement - EBA - 924820

No 78 Kirni *Merra* - Cemetery - EBA - 924821 (see No 101 MBA)

No 79 Kirni *Yere Oldu?* - Cemetery - EBA - 921811 (Catling, ibid, 151)

No 101 Kirni *Merra* - Cemetery - MBA - 924821 (Catling, ibid, 158)

No 102 Kirni *Merra* - Fortress - MBA - 926820 (Catling, ibid, 158)

Stanley Price visited two sites in this area in 1971, *Merra* and *Konno Arasi*. He does not give any observations other than that they are in restricted military areas.

In 1988, the author and a team from the Antiquities Department carried out excavations at the cemetery of Kirni. This resulted in the discovery of a possibly looted, empty shaft tomb of the Chalcolithic period (Plates 5a, 5b), as well as a triple chambered tomb dating to the Early and Middle Bronze Ages.

In 1992 a team from the Department of Antiquities and Museums excavated another tomb, also dating to the Early and Middle Bronze Ages.

7.4.3 1995 Survey at Kirni -*Merra* Settlement

Site Code: KRN 95

Map reference:1:2500 Cadastral XII.42.W2, XII.41.E2, XII.41.W1, XII.41.E2. 1:5000 topographical S 30-a-25-a and S 30-b-25-b;

Plot Numbers: not applicable

Locality name: Merra

Survey method: field walking

Extent of site: approx. 200 x 30m

Recent land use: uncultivated

Finds summary: chipped stone (35), pottery (17), ground stone (40), axes (4) (figs. 3.214-3.222).

7.4.4 Site location and Environment

Kirni -*Merra* settlement and fortress are situated on a hill top next to Kirni cemetery (see section 7.4.8). The site location was used as a military watch point during the troubles in the 1960s, for which a camp was built. Part of the building still remains, the floor is concrete but the walls are mudbrick. This may have buried the pottery evidence on the surface or the pottery could have washed down through erosion. The area is currently uncultivated and is used as a grazing land for sheep and goats.

7.4.5 Survey strategy

The main area of the site was field walked and the artefacts were recorded as KRN 95 plus an individual number. In the figures these simply have an artefact number. Material was also collected from four other locations, a rock shelter (Area I), around a lone olive tree - the only tree in the area (Area II), from the south-facing slope (labelled in the figures KRN 95), and the north-facing slope (labelled in the figures KRN 95-1). (Maps 14 and 15).

7.4.6 The Artefacts from KRN 95

There are four artefact types from KRN 95. There are eight types of ground stone tool, of which querns are the most common with a total of 23. Of the chipped stone, 24 are tools, plus two tool fragments. The pottery is variable in sherd type: handles, rims and bases of both closed and open bodied pots were found. The ware types are mainly brown or red monochrome and there is relief decoration (fig. 3.222 top left) which is rare in the Chalcolithic period but more common in the Early Bronze Age. There is one particularly interesting sherd, which is red on white painted and incised (fig. 3.222 bottom right).

7.4.7 Discussion of KRN 95 Settlement

The artefact types of KRN 95 are very different from the Chalcolithic material found at GKB 96, and it is difficult to date the site one way or the other from the pottery alone. Although there was very little pottery for the site to be described as a settlement, many grinders and rubbers were found during the survey. The ground stone tools are similar to the Early Bronze Age ground stone assemblage, and the parallels with the artefacts of Early Bronze Age site of Marki- *Alonia* is striking. These similarities will be discussed in detail in chapter eight. Overall the artefact types suggest a range of dates from the Chalcolithic to the Early Bronze Age.

The geographical location of the site, high ground yet flat on top, surrounded by flat cultivable land below which catches the breeze at most times of the year, resembles the sites of threshing grounds in Cyprus. The combination of a large number of querns and chipped stone tools and the relative paucity of pottery support the idea that it is more of a place of agricultural activity than a normal settlement. In addition, unlike GKB 96, there is no evidence for a water source. Only small temporary settlements such as watch towers could have been used to keep an eye on the landscape - the range of view runs from the skirts of the Kyrenia mountains to the skirts of the Troodos mountains.

There is also a possibility that the site was a place of burial preparation. To the west, in Dikmen (Dhikomo) village a site with a similar topographical description, there is another Early Bronze Age cemetery. This site was visited in 1988 by the author and the assistant director of Museums and Antiquities of the time, Mr. Abdullrazak Yucel, who worked on the site. According to Mr Yucel, this site had more bronze artefacts than any other site of similar period that he knew (personal communication). It is generally believed by archaeologists that Early Bronze Age tomb sites are located in the northern side of Kyrenia mountains, however this is not the case. There are many cemetery sites of this period in the south side of the mountains, but few have been excavated properly and published.

7.4.8 Prehistoric Cemetery Near KRN 95 Settlement

In 1996 after the discovery of Chalcolithic material at the site of GKB 96, the author revisited the site of KRN 95 to investigate the well known Bronze Age cemetery to its north. In 1988 the author had excavated a tomb at this cemetery, which was recorded as Chalcolithic on the basis of sherdage (plates 5a, 5b;

Sevketoglu, 1988:11). In form it is typical of Chalcolithic tombs such as the bottle-shaped shafts at Souskiou (Christou, 1989) and other sites. During the 1996 visit to the site a second (looted) Chalcolithic tomb was found (plate 5c). Since many of the tombs may have been modified for re-use during the following Early and Middle Bronze Age periods, it is not possible to detect Chalcolithic tombs by their shape alone, and as the majority of the tombs of this cemetery were looted in the 1960s, it is not possible to study the finds that would have given further proof. Further research at the cemetery may provide more clues about the dead of the Goceri settlement.

7.4.9 Conclusions Concerning KRN 95

While it is not possible to come to clear decisions about the dates, from the artefact assemblage and the tombs, it is possible to say that the area was used during the Chalcolithic and the Bronze Ages. It does not appear to be a typical settlement site, other possibilities such as use for agricultural activities or as a burial preparation ground need to be kept in mind. Further work is required to clarify this.

7.5 Research in the Area of Degirmenlik (Kythrea) Village

7.5.1 The Village Name

The commonly-used village names Degirmenlik (meaning mill in Turkish), reinstated after 1974, and Kythrea, given probably in 1930 by the British, are not the original names for the village. In 1930 the Swedish Cyprus Expedition used the name Kythrea for the village, but in 1920 the British government publication, Handbook of Cyprus, gives the name of the village as Kyrka (Luke and Jardine,

1920) and in 1928 Dawkins also gives the name of the village as Kyrka (Dawkins, 1928 vol. II: 59-60). For further discussion see Appendix B.

7.5.2 Site location

Located on the southern skirts of the Kyrenia range, the area of survey and village is situated on the clay rich hills and soils, the Kythrea Flysch, rather than the dolomite rocks of the mountains. It is a repetitive landscape in which the alternating sandstone ridges and deep clay valleys stretch away to the horizon for many miles. The soil in this area is derived from the sandstones and clays, and is therefore poor (Dreghorn, 1979: 67). Because of this the landscape in the area has very little vegetation and suffers serious erosion when the rainy season arrives.

7.5.3 Vegetation and Recent Land Use.

The original spring, which is now completely dry, once helped Degirmenlik to gain fame for vegetable farming. Cauliflower is said to have originated from here. Without irrigation water, dry farming or rain-dependent agriculture is practised. In the 1930s, Westholm wrote that water is surplus in the area but was unsuitable for drinking and for vegetable growing because of its salt content (Gjerstad et al, 1934: 277). Sheep and goat are kept by some villagers but cows are more popular nowadays for their milk which is sold to the milk products co-operative.

7.5.4 History of Research in the Area

A number of people carried out research in this area in the first half of this century, and five sites were reported.

Kythrea - ***Ayios Dhimitrianos***

Map reference: XII:9W:Hali (Stanley Price, 1979: 97). Stanley Price is incorrect as the reference places the site in the sea.

The first archaeological research in this area was carried out in 1930 at a site called Kythrea - *Ayios Dhimitrianos* . The site was excavated by A. Westholm as part of the Swedish Cyprus Expedition (Gjerstad et al, 1934: 277-301). Excavations revealed two phases of stone circular huts, which were dated to the Late Neolithic period.

Stanley Price found no surface finds and the exact site of excavation was not clear either. He reported that the site is eroded, and spread over an area of 10, 000 square metres (Stanley Price, 1979a: 97).

Dikaios mentions an Early Bronze Age settlement a few hundred yards east of the Neolithic settlement below the ruined church. (Dikaios, 1935: 13).

Kythrea - ***Aspropotamos***

Map reference: XXII:3E

Plot number: 27

Extent of site: unclear

The site is located about 300 metres north-east of Ayios Dhimitrianos church. It is subject to active erosion by streams washing away sherds and flints cut from the banks (Stanley Price, 1979a: 97).

Kythrea - ***Kamares***

Map reference: XXII:3E

Plot number: 57

This site is separated from Ayios Dhimitrianos by a river (Aspropotamos), and for this reason it is regarded as a different site. Scatters of flint, bones and sherds were concentrated on a low rise of dark earth within an area with a 20 metre diameter (ibid: 97)

Kythrea - *Phyleri* cave

In 1935, J. Du Plat Taylor, carried out investigations in Phyleri cave north of the village, after artefacts were found while sinking a shaft in 1933. She found two chambers in the cave, which both contained flint and stone implements and the outer chamber contained sherds ranging from the Neolithic to Byzantine periods.(Du Plat Taylor, 1935: 18-19).

7.5.5 1996 Field Survey in the Degirmenlik Area

Archaeologically, Degirmenlik village is well known for its prehistoric site excavated in the 1930s by the Swedish Expedition in Cyprus. Nowadays the site is regarded as Chalcolithic rather than Neolithic, and this new debate prompted me to look for the site and to examine it, as well as looking for new sites in the vicinity.

7.5.6 Site and Survey Strategy

The initial aims for this area were to relocate the excavated site of Ayios Dhimitrianos and to survey the area surrounding the site for other prehistoric sites, assessing the existence of shifting or drifting settlement patterns. However, relocating the site proved to be very difficult due to incorrect grid references and out of date descriptions of the site's location. It was difficult to find the original site since the same locality name occurred many times in different parts of the village without the plot number being stated in all known publications. Some co-ordinates were non-existent in the map series, some were placed in the sea. The only information was that it was located on the eastern side of the village. The land in this direction is arid, with large fields without many landmarks. In the summer time it is dry and brown in colour. After wasting a couple of days randomly trying out suspected areas for settlements it became clear that it was not going to give any results.

A survey strategy was planned to start from the east end of the village, covering the area from the foothills of the Kyrenia mountains in the north down to the flattening landscape in the south. The systematic field walking in the area with a team of five was limited to three days. Time was very important in the 1996 season since surveying GKB 96 took three weeks longer than expected. Although we had very limited time to carry out major extensive field walking, covering all these areas, searching for the famous site as well as others, we were able to select a suitable area for field walking that could be covered in a short time. Several days of field walking in the area eventually proved successful. We located an Iron Age site (Dumlupinar) and another recorded prehistoric site (Kemer) and I believe we succeeded in relocating the excavated site of Ayios Dhimitrianos (see Maps 16 and 17).

There were several sites with overlapping locality names, in this case both locality names are given.

7.5.7 Degirmenlik - *Cukurdere Mevkii / Dumlupinar (Ayios Dhimitrianos)*

Site code: DCD 96

Map reference: 1:2500 Cadastral XXII:3:E1; 1:5000 topographical S 30-b-25-c and S 30-c-05-b

Plots surveyed: 30

Locality name: Cukurdere/Dumlupinar

Survey method: systematic field walking

Extent of site: not estimated

Recent land use: agriculture

Finds summary : chipped stone (2), ground stone (2), axe (1), figurine (1) (figs. 3.223, 3.224).

This appears to be the site excavated by Westholm. During the survey, a stone bowl fragment, axe fragment, chert tools, pierced stone disc and a damaged figurine made of clay were discovered (figs. 3.223 and 3.224). All of these fit comfortably in the repertoire of material found on Chalcolithic sites in Cyprus. The figurine is of particular importance since there are no exact parallels known. It is 10.95cm high, 4.7cm wide, and weighs 84 grams. Its head, arms and base are missing (fig. 3.223). It has a cylindrical hollow body with a possible mouth, necklace or beard below the broken head. The most significant feature of this figurine is the two breasts. The figurine has a slight bump on the tummy area similar to that seen on some Chalcolithic figurines. The figurine is made of very fragile, soft but gritty pink clay with cherry red paint on parts. The stone bowl (fig. 3.224a.) is also more like those found on the Chalcolithic sites than the Aceramic ones. Although very few artefacts were found, the figurine and the stone bowl support the idea that this site belongs to the Chalcolithic period.

7.5.8 Degirmenlik - *Kemer Mevkii*: *(Kamares)*

Site code: DKM 96 followed by the plot number.

Map reference: 1:2500 Cadastral XXII:3: E2; 1:5000 topographical S 30-b-25-c and S 30-c-05-b

Plots surveyed: 29, 30, 57 and 58.

Locality name: Kemer

Survey method: systematic field walking

Extent of site: approx. 80 x 80m.

Recent land use: agriculture, grazing

Finds summary: chipped stone (3), ground stone (2), axes (2) (figs. 3.225-3.227).

The northern part of plot 57 had chert tools, an axe fragment, an unfinished chisel, a stone bowl fragment and a tortoise-shaped quern like the ones from Tatlisu - *Ciftlikduzu*. Surface finds are not sufficient to date this site, although the author is inclined to date it to the Aceramic Neolithic.

7.5.9 Degirmenlik - *Dumlupinar*: *(Aspropotamos/ Ayios Dhimitrianos)*

Site code: DDP 96

Map reference: 1:2500 Cadastral XXII:3:E1; 1:5000 topographical S 30-b-25-c and S 30-c-05-b

Plots surveyed: 27, 29 and 59/1

Locality name: Dumlupinar

Survey method: systematic field walking

Extent of site: approximately 920 x 840m squares

Recent land use: grazing

Finds summary : ground stone (5), axes (1), figurine (1) (figs. 3.228-3.230).

The area is covered with pottery scatters of the Iron Age and Hellenistic periods. A head and neck of a horse figurine fragment of this period was found. However, not all the artefacts found were Iron Age or Hellenistic. A damaged adze, a round crusher stone and another crusher with one side used as a rubber are prehistoric remains. Fragments of two stone tripod bowls are of uncertain date. This area fits the description of Dikaios' Early Bronze Age settlement. However during the 1996 survey no obviously Early Bronze Age material was recovered.

7.5.10 Conclusions Concerning the Degirmenlik Area

DKM96 is a good candidate for a prehistoric site. However, with such a small number of artefacts scattered in a large area, the size of the site is difficult to estimate. The artefacts from this site resemble those of TCD 96, especially the tortoiseshell shaped grinder (figs. 3.111, 3.112, 3.225). On the basis of the artefact typology and comparison with Aceramic period sites, DKM 96 would seem to be of Aceramic Neolithic date. The other prehistoric site surveyed in 1996, DCD 96, is almost certainly Chalcolithic and is probably Ayios Dhimitrianos, excavated by the Westholm. The absent late neolithic period is probably awaiting discovery by intensive survey in the area.

The potential of this area for other prehistoric settlements is immense. Unfortunately the current survey was hampered by a mixture of inaccurate map references and a shortage of time. The Phyleri cave with pottery from the Neolithic period was not relocated, and there is scope for further survey in this area both on known sites and in search of more prehistoric settlements.

7.6 Minor Sites of the South Face

7.6.1 Kozan (Larnaka tis Lapithou)

At Kozan village, Larnaka tis Lapithou - *Panayia Kathari* was relocated, but had no surface finds. Larnaka tis Lapithou -*Ayia Marina* was not found.

Chapter 8

Comparisons and Discussion

8.1 Introduction

In considering comparisons between sites, I will treat the material in chronological order. I will first consider together the sites of the same period discovered and surveyed for this thesis, and then compare them with some selected excavated sites of the same periods. The topographical situation and the artefact assemblages will be the basic mediators for comparison; other topics will be addressed where relevant. Excavated sites can provide reliable and secure stratigraphical evidence for dating the sequence of settlement history, and our knowledge of the periods in question is increased through the excavations of the particular sites I have chosen to use for comparisons. There have been suggestions that the each of the periods under discussion was influenced by contact with the surrounding mainland, and there will be a brief discussion of this at the end of each chronological section.

The comparison is complicated by a number of factors. Firstly, as the southern part of the island is inaccessible to me, the artefacts from the excavated sites I am using for comparison cannot be studied at first hand but only through the publications that are available. However, I did have access to the material excavated from Ayios Epiktitos-*Vrysi* and collected during survey at Ayios Epiktitos-*Mezarlik*, which is stored in Kyrenia Castle, and I also studied some sherds in the Ashmolean Museum in Oxford. I did export some sherd material from the survey to Edinburgh for a second opinion from specialists familiar with the material, but no help was forthcoming (which I understant was due to political pressure and fear of reprisals). Secondly, some publications are only available in preliminary form, and others are still awaited after many years - several sites important for this thesis fall into this category, with the artefacts from Kalavasos-*Tenta* not yet published, Kissonerga-*Mylouthkia* awaiting final publication, Kandu-*Koufovounos* available only in a preliminary report, as is Souskiou, while the second volume of Kissonerga-*Mosphilia* was published just before the submission of this thesis. A third factor is the different excavation methods used on the sites required for comparison - for instance, some sites were only trial trenched, and others were more fully excavated; in addition, these sites were excavated at various times during this century with different concepts of excavation methods and techniques, and some of these sites were excavated for a long time by different people.

8.2 The Aceramic Period

Three sites that were surveyed could be dated definitely to the Aceramic period. Two of these sites was known previously - these are TCD 96 and BVS 96. The third site is KYA 95-268 which was discovered by the author during the 1996 survey season. There are three further sites, two of which will be discussed in the Late Neolithic section of this chapter but are worth mentioning briefly here because it is possible that they represent the Aceramic period as well. One of these is the newly found site GRP 97, the other is TKY 96. The third site that is possibly Aceramic is DKM 96.

The excavated sites of Aceramic period used for comparison are Khirokitia-*Vounoi* (Dikaios, 1953), Cape Andreas-*Castros* (Le Brun, 1981), Kalavasos-*Tenta* (Todd, 1987), Petra tou Limniti (Gjerstad et al, 1934: 1-12), Klepini-*Troulli*

(Dikaios, 1962: 63-72), Kholetria-*Orthos* (Simmons and Corona, 1993; Simmons 1996), Dhali-*Agridhi* (Stager and Walker 1989), and Parekklisha-*Shillourokambos* (Guilaine et al, 1995; Briois et al, 1997). I shall also make reference to Kataliondas-*Kourvellos* (Watkins 1979; 1983), although it is only known from intensive surface survey.

8.2.1 Topography and Site Location

The surveyed sites were found in different types of location: of the definitely Aceramic sites, TCD 96 is located near the seaside on a flat cliff-top, whereas BVS 96 and KYA 96-268 are located inland on the coastal plain or coastward skirts of the mountains. Of the three other sites, DKM 96 is not just inland, but on the south side of the mountains, while GRP 97 and TKY 96 are both located near the seaside. The other Aceramic sites also fit into these three topographical variations The coastal sites are Petra tou Limniti (actually on a island now), Klepini-*Troulli* and Cape Andreas-*Castros.* The inland sites on the skirts of the mountains, some of which are on small hills, are Khirokitia-*Vounoi*, Kalavasos-*Tenta*, Parekklisha-*Shillourokambos*, and Kholetria-*Ortos.* Dhali-*Agridhi* and Kataliondas-*Kourvellos* are both well inland, away from the coastal region, Kataliondas-*Kourvellos* being situated in the foothills of the Troodos mountains.

If we look at the Aceramic sites of the north coast it seems as if there is a further division in choice of location: the sites to the west of Catalkoy village are inland, and those to the east are coastal. Catalkoy is the site of the easternmost prehistoric site known so far on the coast (Ayios Epiktitos-*Xylomandra).* There could be several reasons for this division: the long beaches and the suitable headlands are mainly on the north east coast, and there is little depth of soil or beach on the west coast; the water sources on the west coast seem to be higher up the mountains, while to the east they tend to occur close to the sea; the sites could represent different cultural periods within the Aceramic Neolithic; or perhaps we have not yet found the sites near the coast or on the hills for opposite cases.

It has been suggested widely that Aceramic sites occupy promontories and headlands (eg. Peltenburg 1978: 68; Knapp et. al. 1994: 407) because they represent first landfall and are easily defensible sites. This follows the idea that colonisation of Cyprus occurred by accident, with fearful settlers hovering on the brink in case they are forced to run away by savage natives, human or animal. The evidence we now have shows that this was far from the case. The colonisation of Cyprus was a deliberate undertaking, as has been suggested by those considering the economic data (eg. Davis 1987 and Croft 1991) The earliest known Aceramic Neolithic site (ie. excluding Akrotiri-*Aetokremnos*, which is regarded as pre-Neolithic) is Parekklisha-*Shillourokambos*, which now has clear evidence of the presence of cattle and plentiful obsidian (Guilaine et al, 1993; Briois et al, 1997). Despite its early date, it is not a coastal settlement but is sited 5km inland. TCD 96 also has cattle and plentiful obsidian, which is not found in significant quantities at the classic, sixth/seventh millennia BC excavated sites, and it seems reasonable to suggest that it may date from the same early time (ie. early seventh/late-eighth millennia BC). It is on a cliff, but not on a defensible promontary or headland (although it is possible that it was when established). These two sites do not represent accidental settlement but deliberate colonisation - the presence of cattle cannot be explained in any other way, and the quantity of obsidian over a long period implies regular contact with the mainland. Other candidates for an early date are Kalavasos-*Tenta*, which has early carbon dates and significantly more obsidian than Khirokitia-*Vounoi*, and Kataliondas-*Kourvellos,* although in this case there are no compelling reasons such as carbon dates, cattle or large quantities of obsidian to support this at present. In a recent conference paper, Carole McCartney has suggested that the earliest occupation at Kalavasos-*Tenta* belongs to the seventh or late eighth millennia BC on the basis of her study of the chipped stone from the site (Trevor Watkins, pers. comm.). The chipped stone from TCD 96 needs specialist study before its date be better assessed. The earliest sites, then, were not on defensible promontories. Those sites came later, along with those on defensible hills. It is possible, therefore, that promontory sites have been completely misunderstood. Their position may relate more to environment, economy (fishing), or social developments. Watkins (1981) noted that the Aceramic sites were located either on the coast or in hilly terrain with varied use potential, and not in the plains that are best suited to agriculture.

8.2.2 The Size of the Aceramic Settlements

For years it has been accepted that Khirokitia-*Vounoi* is an unusually large Aceramic site, and this size has led to suggestions that it is a particularly important site. Until recently this view seemed reasonable, but now it is time for a re-assessment. Although Khirokitia-*Vounoi* is particularly large, the size of the Aceramic settlements in general is greater than previously thought, and greater on the whole than the Late Neolithic settlements. There are exceptions such as Cape Andreas-*Castros* (estimated to be 1700 square metres [Le Brun, 1981:13]) and Petra tou Limniti (reported as only two huts at one time 30 x 10m [Stanley Price, 1979:98]), but these two sites, both coastal, could have been subject to sea erosion destroying most or part of the site. It is also probable that the topographical situation, rocky outcrops and the coast, limited the expansion of these sites. On the other hand, it could be that these sites were merely used as small fishing settlements whose size was controlled by the number of people it could afford to sustain. It is well-known that hunter and gatherer societies are generally smaller than farming societies. The size of sites BVS 96 and KYA 95 was impossible to estimate from survey, and further investigation is required, but TCD 96 is estimated at about four hectares; Kalavasos-*Tenta* had a surface scatter of about four hectares, although the excavated part measures about 40 x 65m (Todd, 1987: 11); Parekklisha-*Shillourokambos* is also about four hectares (Guilaine 1995:14); and Kholetria-*Ortos*- is estimated at 2.4 hectares (Simmons, 1993:1). The earliest sites, Parekklisha-*Shillourokambos* and TCD 96, and possibly Kalavasos-*Tenta,* are of considerable size, and this must be relevant to any reconstruction of the colonisation of Cyprus and establishment of the Aceramic culture on the island.

Comparisons with the finds assemblages of excavated sites might establish a better understanding of these differences. The key to the answer for this lies within the architecture (which can not be compared with surveyed sites), the lack or surplus of certain artefact types and the faunal remains which represent the economy and to an extent the local environment which varies from site to site.

8.2.3 The Material Culture

The complications of the artefact comparisons were mentioned earlier in this chapter. However there are some artefact assemblages that can be used for reliable comparison. From the surveyed sites the most significant artefact differences between the sites of BVS 96, KYA 96-268 and TCD 96 are found in the ground stone tools, the obsidian tools and the faunal remains. The differences in the variety and amount of artefacts are mainly due to the state of the sites and the type of survey carried out on them. BVS 96 is now mainly built over and provided very few artefacts during field walking. From KYA 96-268 only one definitely Aceramic artefact (a stone vessel fragment) was collected, along with other potentially Aceramic artefacts, from field walking in the surrounding ploughed fields. TCD 96 was a site which had spoil heaps from the trenches dug unknowingly by the owners of the neighbouring chicken farm for dumping refuse. The artefacts were collected from these spoil heaps and from field walking of the surrounding fields. Therefore the amount of artefacts is greater from this site than from the other two.

When the ground stone vessels from all three site are compared, there is a clear similarity between the vessels of BVS 96 and KYA 95-268. The ground stone vessels from both these sites have raised motifs and both type of artefacts are known to come from other Aceramic sites such as Khirokitia-*Vounoi* (Dikaios 1953, plates XLVII 104 and 1192a). The ground stone of Dhali-*Agridhi* is also similar to that from BVS 96 and KYA 95-268. However, TCD 96 does not have any comparable items. The ground stone vessels are large and crude compared to the delicately and carefully made vessels of the other two sites surveyed and other Khirokitia culture period sites. The ground stone published from Klepini-*Troulli* is insufficient for comparison, but the Cape Andreas-*Castros* ground stone is mixed, with well made vessels of the type seen at Khirokitia-*Vounoi* as well as crudely made ones of the kind found at TCD 96.

The other main difference between these sites is the lack of obsidian in BVS 96 and KYA 96-268, whereas TCD 96 has a noticeable amount for Cyprus. Although most Aceramic sites do have obsidian, it is normally in small quantities, so that Klepini-*Troulli* was suggested to have been the distribution point for obsidian to the whole island because it had 24 pieces, or 2% of the entire lithic assemblage (Peltenburg, 1979c). TCD 96 has a total of 28 obsidian pieces from survey alone. While this is little more than from Klepini-*Troulli,* it is not only just from surface work, but represents 30% of the chipped stone found during the survey, by far the greatest percentage of any lithic assemblage known on Cyprus. Of course, only a limited excavation was carried out at Klepini-*Troulli,* and it is possible that a wider investigation might reveal a much higher percentage of obsidian. There are two sites with a greater number of obsidian artefacts than at TCD 96 but these form a much lower percentage: Parekklisha-*Shillourokambos* has 217 pieces, which is between 10% and 14.6% of the chipped stone assemblage according to the area under investigation (Briois et al, 1997:104), and Kalavasos-*Tenta* has 32 pieces (Todd 1986:15). As the artefacts from this site have not yet been published, it is not clear what percentage of the total lithics found this represents, but if it were substantial we would surely have heard by now. Only 0.5% of the lithics from Dikaios's excavations at Khirokitia-*Vounoi* were obsidian (Dikaios 1953, Appendix I: 413) and there are no details yet about Le Brun's excavations at the same site, while the 13 pieces from Cape Andreas-*Castros* represent only around 0.15% of the chipped stone (Le Brun, 1981:31, 40). Such a large amount and high percentage of obsidian from Parekklisha-*Shillourokambos* and TCD 96 shows the dependent or rather more substantial usage of this material, which is likely to relate to the early date of these two sites, while a lesser usage of obsidian is detected during the later period from the lower number of obsidian pieces found. The other chipped stone (chert) is more difficult for a non-specialist to discuss, although it can be said to be largely a blade-based industry. The one similarity which was noticed was that between TCD 96 chert and some of the Cape Andreas-*Castros* chert. They are similar in size, but the Cape Andreas-*Castros* material seems to be better worked at the edges (Le Brun, 1981: figures 33-38). The site was not completely excavated, and there could be earlier periods at the bottom.

The third and final difference between the surveyed sites deals with the two cattle bones found at TCD 96. Cattle has only recently been recognised to have existed in Cyprus as early as the Aceramic period, and so far besides TCD 96 it comes from only one other site, Parekklisha-*Shillourokambos* (Guilaine et al 1995). This is another reason for dating TCD 96 earlier than the other sites surveyed for this thesis, and also earlier than most known Aceramic sites on Cyprus. The two bones from TCD 96 are in good condition; those from Parekklisha-*Shillourokambos* seem to be very fragmentary. Previously sheep, pig and possibly deer were thought to have been the only food domesticates introduced in the Aceramic (see for instance Davis 1987; Croft 1991:65-66 ; Held 1992b: 132).

Three other sites to mention in this section are DKM 96, TKY 96 and GRP 97. DKM 96 had very few artefacts indeed, but a tortoise-shaped grinder (fig 3.225) is very similar to one from TCD 96 (fig 3.111). TKY 96 is worth mentioning as a site with possible Aceramic remains because of the high number of chert artefacts found on the site. There are known sites of the Aceramic period which have produced large numbers of chipped stone artefacts. GRP 97 is treated as belonging to the Late Neolithic because of the axes, socketed stone and the similarity of the architecture seen in the section with that of Ayios Epiktitos-*Vrysi*. However, during my visit no significant pottery was found to date the site as Late Neolithic, and some of the ground stone seemed closer to the Aceramic material. Therefore the options should be kept open for this site until a specialist study of the chipped stone can be carried out.

8.2.4 External Contacts

It has long been accepted that the Aceramic period in Cyprus derives from initial settlement from either Anatolia or the Levant (see for instance, Stanley Price

1977a, 1977b; Held 1992b; Davis 1987). There is little in the material culture to pinpoint the original homeland, therefore any foreign material is of particular interest. Until now obsidian has been the only recognised import; it occurs on most Aceramic sites, and all the tests have shown it to come from central Anatolian sources. Unfortunately this obsidian is known also to have been used in the Levant, and thus could have reached Cyprus by a circuitous route. The evidence from TCD 96 and Parekklisha-*Shillourokambos* now shows that obsidian was brought in large quantities and worked on sites in Cyprus, whereas it was previously thought that the blades were imported ready made (Peltenburg, 1979c:36-7; Todd, 1986:16). The location of TCD 96 on the north coast, and the very high percentage of obsidian found in the chipped stone assemblage there, may indicate a direct route from Anatolia after all. These two sites also show that cattle was present in the early Aceramic period. This offers another chance for clarifying the place of origin of the initial settlers; it also demistifies the Aceramic to some extent, making it more similar to mainland cultures, and reducing the image of deliberate isolation and difference which is common in the literature. (for an extreme example of this view see Ronen, 1995). Unfortunately, the cattle bones found so far have not been particularly helpful in respect of origin, as those from TCD 96 appear to come from an unusually small species, and those from Parekklisha-*Shillourokambos* are very fragmentary. However, the presence of cattle bones on two parts of the island, and from more than one deposit at each site, indicates considerable sea-faring skill on the part of the Aceramic population of Cyprus - they were not accidental arrivals who drifted to Cyprus at the mercy of the currents, but were capable navigators who could bring very large animals to the island in their craft. Why cattle died out - whether navigational and livestock handling skills were insufficient to import a varied enough breeding stock, or whether the environment was unsuitable for cattle at that period - is a question that will now need to be addressed.

8.3 The Late Neolithic Period

From the survey project four sites with Late Neolithic material were surveyed: KYR 95, KEK 95 , TKY 96 and GRP 97, and probable Late Neolithic pottery was also found at EDT 95 and GKB 96. These sites will be compared mainly with the partially excavated sites of Ayios Epiktitos-*Vrysi* (Peltenburg, 1982b), Sotira-*Teppes* (Dikaios ,1961), Kandu-*Koufovounos* (Mautzourani, 1996) and Paralimni-*Nissia*. (Flourentzos, 1997), with additional comments concerning Philia-*Drakos A* (Watkins, 1970, 1972) and Klepini-*Troulli* (Dikaios, 1962: 63-72). Compared to other periods, excavated - and indeed known - Late Neolithic sites are rare.

8.3.1 Site Location

With the exception of KYR 95, the surveyed Late Neolithic sites are all on the coast. KYR 95 is located inland on the hills of the village. All the sites have evidence of a spring or river water source nearby. KEK 95, TKY 96 and GRP 97 are all coastal settlements. Turning to the excavated sites, Sotira-*Teppes* and Kandu-*Kufovounos* are both inland on a hill, Philia-*Drakos A* is on the side of a valley, while Ayios Epiktitos-Vrysi, Klepini-*Troulli* and Paralimni-*Nissia* are on the coast. With so few sites of the Late Neolithic period known both in the south and in the north it is problematic to generalise the location of settlements as coastal or inland. However the evidence so far shows more coastal sites in the north and more inland in the south. It is quite possible that there are still sites waiting to be discovered in different geographical positions or that they have been destroyed by the rapid development along the coast of Cyprus. Wherever the sites are located they are all close to a water supply. Ayios Epiktitos-*Vrysi* and Paralimni-*Nissia* are both on headlands, a situation which appears to have been accentuated at the first two of these by the building of a wall separating the settlement from the hinterland. Philia-*Drakos A*, in its early phase, was also surrounded by a wall and a ditch. Whether this, and the hilltop position of Sotira-*Teppes* and Kandu-*Kufovounos*, is to be seen as defensive is unclear. It may simply be a matter of demarcating a settled area, or a similar social matter that cannot be understood from archaeological research. The proximity of arable land seems to be more important in the Late Neolithic than the Aceramic - for instance, Sotira-*Teppes* and Philia-*Drakos A* are well situated in this respect. All the sites surveyed also had access to agricultural land on the fertile northern coastal strip, although in the present day this is used for market gardening and tree crops rather than for arable .

8.3.2 The Size of the Late Neolithic Settlements

Any discussion of the size of the Late Neolithic settlements must be partly speculation in the light of the scarcity of excavated sites. The approximate sizes for most of the sites surveyed are fairly similar: KEK 95 is by far the largest, at 480 x 180m, but this defines a large spread of artefacts and probably not the actual architecture beneath; TKY 96 is 45 x 115m; GRP 97 is 120 x 50m; GKB 96 is 145 x 125m; and EDT 95 is 95 x 30m, which may appear small, but originally the site could well have been larger, part of it now lying beneath the road and the village. The size of KYR 95 is uncertain, and the extent of the Late Neolithic occupation at GKB 96 and EDT 95 is unknown. Although this data is derived only from survey, and surface scatter may extend further than architectural remains, it seems from the sizes of these settlements that Late Neolithic sites above 3,000 square metres are not unusual. Flourentzos (1997:2) points out that Paralimni-*Nissia*, at 3,250m square, is slightly smaller than Sotira-*Teppes* but much larger than Ayios Epiktitos-*Vrysi*. However, although only 600 square metres was excavated at Ayios Epiktitos-*Vrysi* the site is known to extend across the headland, and we cannot estimate with any certainty how much more has been lost by sea erosion. The largest of the excavated Late Neolithic sites is Kandu-*Koufovounos,* measuring 150 x 50-70m based on surface scatter (Stanley Price:1979a: 135). Until more sites of this period are excavated, or investigated more intensively with non-intrusive techniques, it will not be possible to say whether a few large sites stand out amongst a background of medium-sized ones, or whether there is great variety in settlement size at this period.

8.3.3 The Material Culture

It was expected that the dating of Late Neolithic sites would be comparatively easy because of the presence of pottery of well-known types. However, the surveyed sites believed to be Late Neolithic produced only a few sherds of diagnostic pottery each, just adequate to date them. There is therefore a possibility that the sites go back earlier, as much of the other material could also be from the Aceramic period. However, the lack of ground stone vessels typical of Aceramic sites on the surface led me to date these sites to the Late Neolithic until further detailed work can be carried out on them.

KYR 95 produced six diagnostic sherds, two of which are clearly Late Neolithic, two are Chalcolithic, while the remaining two may be either Late Neolithic or Chalcolithic (fig 3.96). The Chalcolithic sherds are similar to those found at AEM 95, EDT 95 and GKB 96, which appear to span the entire Chalcolithic period between them. KYR 95 was already dated to the Late Neolithic by earlier surveyors, but no mention has previously been made of Chalcolithic material at the site. The TKY 96 coarse ware is similar to that found in Sotira-*Teppes* (Dikaios, 1961: plate 85, 514y). There are only two fine wares from TKY 96; one is the neck of a jug that could be either Neolithic or Chalcolithic, the other a body sherd with a motif resembling those of Chalcolithic rather than Neolithic pots (fig. 3.140). The pierced disc is probably late. KEK 95 produced a single diagnostic sherd (fig. 3.105c), which is red on white painted typical of Late Neolithic assemblages. No pottery was found at GRP 97. The Late Neolithic and Early Chalcolithic pottery at Paralimni-*Nissia* has a high percentage of red on white ware and less combed ware, like Ayios Epiktitos-*Vrysi* (Flourentzos , 1997: 4) or Philia-*Drakos A*. EDT 95 has a number of sherds that could be Late Neolithic and have unusual designs such as random dots and thin parallel bands. Examples of these are shown in figures 3.38 4F and 3G; 3.39, top row; and 3.41, 4D, 4D and 3B.

Ground stone tools can only help us to say that similar tools exist or they do not, since the dating of ground stone is extremely difficult. In this case ground stone implements such as pounders and grinders exist in all these sites. TKY 96 had a polisher in its ground stone assemblage (fig. 3.132, 3G) as did KEK 95 (fig. 3.105a), which suggests that pottery was produced on these sites. Nothing distinctive was found amongst the ground stone at KYR 95, and no ground stone was collected from GRP 97. Nevertheless, the pivot stone at GRP 97 is very reminiscent of those seen at Ayios Epiktitos-*Vrysi*.

Chipped stone is also problematic in dating and comparison, and one can only comment on its existence and quantity. The TKY 96 chipped stone deserves specialist attention because of the huge quantities recovered, and the possibility (as with much surface chipped stone in Cyprus) that some of it might not be prehistoric .

GRP 97, KEK 95 and TKY 96, all produced a moderate number of axes. It is difficult to compare them with examples from excavated sites by studying illustrations alone, and it requires specialist work, although they bear a general resemblance to those from Ayios Epiktitos-*Vrysi.*

8.3.4 The Architectural Evidence

Architecture is an area which is difficult to address through survey. However, in the case of GRP 97 where a section has been cut through the site, it was possible to observe some architecture which bears a strong resemblance to Ayios Epiktitos-*Vrysi.* The shape of the houses at Ayios Epiktitos-*Vrysi* is rather different from that at the other excavated sites of Kandu-*Kufovounos*, Sotira-*Teppes* and Paralimni-*Nissia* because the houses were built within hollows in the ground, but otherwise there is no major difference in the architecture. It is worth noting that Ayios Epiktitos-*Vrysi* was originally reported as "toumba", meaning mound (Stanley Price, 1979a: 104).

It is commonly stated that Cyprus does not have tell sites, which are formed as a result of the accumulation of settlement debris in the same site, mainly from mud-brick buildings (eg. Peltenburg, 1978: 55). Factors affecting the build-up of a tell include a) the volume of mud relative to the area of the settlement; b) the spacing of the buildings; and c) subsequent erosionary forces. However, tell sites do exist in Cyprus, but they are not the large ones found in Turkey and the rest of the Western Asian mainland. During the survey project it was noticeable that some sites could be classified as mounds. TKY 95 and GRP 97 can be seen clearly to be tell sites (plates 1c, 4c) and slight bumps on the ground were also observed at the later site of GKB 96 (which does have some Late Neolithic material). It is possible that the shifting and drifting of these settlements prevented them from developing into large mounds; another important factor is that there are no alluvial fans as in Anatolia and Mesopotamia, so that mud-brick is rarely the sole building material. Mud brick or pise houses are known to have existed at Aceramic Kalavasos-*Tenta* (Todd 1987) and Late Neolithic Ayios Epiktitos-*Vrysi* (Peltenburg 1982b). Archaeological mounds have long been ignored in Cyprus, where they would only show up easily in the Mesaoria plain, which is flat. Other parts of the island have a hilly and mountainous landscape which can disguise slight unnatural elevations. The two coastal mound sites of GRP 97 and TKY 96 were somehow level with the ground on one side and mound shaped from another view; the rise at GKB 96 was detected during the setting up of the grids on the site.

8.3.5 External Contacts

There is no evidence of foreign contact in the Late Neolithic although it is commonly thought of as a culture arriving afresh. This view is based partly upon the chronological and archaeological gap that exists between the Aceramic Neolithic and the Late Neolithic sites, and partly by the differences in material culture, particularly changes in architecture, the use of pottery, and new burial practices. If the Late Neolithic occupants were new arrivals, then it is highly surprising that there are no foreign materials in the Late Neolithic assemblages. The presence of a minute amount of obsidian is accepted to be "left overs" from the earlier Aceramic imports, or contamination from the Aceramic levels below Late Neolithic sites, as some Late Neolithic settlements seem to be built on Aceramic settlement sites after a considerable period of abandonment.

8.4 The Chalcolithic Period

The surveyed sites that are definitely dated to the Chalcolithic period are AEM 95, GKB 96 and EDT 95. Since there is pottery from all the sites of this period and some are published in preliminary stages, comparisons can be made with many sites, but the main sites that will be used for comparison are Kissonerga-*Mosphilia* (Peltenburg 1987a, 1991a,b, 1998), Lemba-*Lakkous* (Peltenburg 1981, 1982a, 1983, 1984, 1985d) and Erimi-*Pamboula* (Dikaios 1936; Bolger 1988) all of which are published, as well as reference to Kalavasos-*Ayious* (Todd, 1986, 1991).

8.4.1 Site Location

All four surveyed sites are located inland, GKB 96 on an elevated natural plateau, AEM 95 on a gentle slope, .DCD 96 on a steeper slope and EDT 95 on a spur near a deep ravine. GKB 96 and DCD 96 are located on the southern side of the Kyrenia mountains, and EDT 95 and AEM 95 are on the seaward slopes. The excavated sites of Erimi-*Pamboula* and Kalavasos-*Ayious* are located inland, Kissonerga-*Mosphilia* and Lemba-*Lakkous* are on the coastal plain, whereas Kissonerga-*Mylouthkia* is close to the coast, but none is in the centre of the island or on the landward slopes of the Troodos. The discussion concerning the location of the Aceramic sites (see section 8.2.1) is also relevant to some extent to the Chalcolithic sites, but colonisation is not an issue for this period although there are still unanswered questions concerning the transition from the Late Neolithic to Early Chalcolithic in this context. It is notable that all four coastal Late Neolithic sites have some Chalcolithic material in the upper levels.

8.4.2 The Material Culture

The material culture for the Chalcolithic period is rich and diverse. The pottery is the most numerous and the most easily compared material from these sites. The painted motifs on the sherds suggest links with periods and possible dates. The bases, rims and vessel shapes also provide information for comparison. Omphalos and nipple bases are especially known to relate specifically to the Chalcolithic period. The drilled sherds which are common both in the Late Neolithic and the Chalcolithic periods are plentiful on these sites.

Ayios Epiktitos-*Mezarlik* was dated by Peltenburg to the Middle Chalcolithic. The painted pottery from AEM 95/95-1/95-2 (henceforth AEM 95) has hatched lines, bands with diverging lines, ladder design, dots and rim bands, bands of hatchings. The most interesting comparison is probably the broad band with dot designs (fig. 3.24, AEM 95-3H) which also occurs at Lemba-*Lakkous* (Peltenburg, 1985d, fig. 60, 8). Motifs similar to those found at AEM 95 occur at Kalavasos-*Ayious* (Kromholz, 1981: figs 2-14) but none of the vertically pierced lugs common at Kalavasos-*Ayious* occur at the northern Chalcolithic sites. On the whole AEM 95 pottery covers the broad range of pottery from other Chalcolithic sites, and there is little to pick out which can narrow down the dating, or suggest particular areas of contact.

GKB 96 has many different varieties of pottery. These include much of the common repertoire of the Chalcolithic periods with parallels from almost every known Chalcolithic site in Cyprus regardless of its phase. Some examples are bases and ear lug handles known from Kalavasos-*Ayious* (Khromholz, 1981: 37, figs 2-2:8; 2-2:13, 2-2:16) and from Erimi-*Pamboula* (Bolger, 1988a: fig. 10:1-12). Nipple bases are also known in GKB 96 (figs 3.203-205), and have parallels at Kalavasos-*Ayious* (ibid:.43 2-6:11,12,13), Lemba-*Lakkous* (Peltenburg 1985d, figs 53.11,13,15; 54.1), and Kissonerga-*Mosphilia* (Peltenburg 1998, figs. 59.7; 61.7; 65.3, 4). Omphalos bases, which are known to occur in phases of both the Late Neolithic and the Chalcolithic, were also found at GKB 96 (fig 3.210). Parallels come from Kalavasos-*Ayious* (Khromholz, 1981: 42, fig 2-5:17, 18), Lemba-*Lakkous* (Peltenburg 1985d, figs. 53.8, 10; 55.2, 3; 57.1, 6), Erimi-*Pamboula* (Bolger, 1988a: fig.8:15-19 and 21-24) and Kissonerga-*Mosphilia* (Peltenburg 1998, figs. 68.2; 69.1, 7; 70.7, 8; 72.5, 7 and others). GKB 96 coarse ware bases (fig 3.209) have parallels with what is known as group B bucket/tray from Kalavasos-*Ayious* (Khromholz, 1981:46, fig.2-9:1-3; Baird, 1991:23, fig.2.1:1). Similar ones were noted at Kissonerga-*Mosphilia* in periods 3A, and B, which are dated to the Middle Chalcolithic (Peltenburg, 1998: fig 61-2). The repertoire of common painted motifs includes parallel bands, hatches, diamonds, and wavy lines with dots, which also occur frequently at Lemba-*Lakkous*. (Peltenburg 1985d, figs. 59-61). In addition to the Chalcolithic pottery there are some Late Neolithic sherds at GKB 96. There is also some pottery that is unknown elsewhere on the island so far as I can ascertain, and whose date is therefore unclear.

EDT 95/95-1 (henceforth EDT 95) has a variety of pottery: there are the common hatched painted motifs which belong to the Chalcolithic period, and there are also more solid painted band motifs which are probably Late Neolithic. These solid paintings are sometimes diamond shaped (fig. 3.37, 3B first column) or make strings of diamonds (fig. 3.45 EDT 95-1-4E top left). Specific sherds that could be Late Neolithic are discussed above (section 8.3.3). EDT 95 also has omphalos bases, which could be Late Neolithic or Chalcolithic periods, and nipple bases (eg. fig. 3.46-2G) which are known from many Chalcolithic sites in Cyprus (for parallels see above GKB 96).

KRN 95 has two sherds (fig 3.222 top left, and Area II Olive Tree) which have strong parallels at Marki-*Alonia* (Frankel and Webb, 1996: fig 7.9 P5916 and P7037). This has implications for the date of this site, suggesting that it covers the Chalcolithic/Early Bronze Age transition.

The figurines are particularly important, both for dating and for examining the homogeneity of material culture. During re-sorting of Peltenburg's survey material from Ayios Epiktitos-*Mezarlik*, a clay figurine was found which is typical of the seated Chalcolithic figurines known from sites in the south-west. The figurine head from GKB 96 has parallels at Kalavasos-*Ayious* (Todd, 1991:10, fig. 7), Lemba-*Lakkous* (Peltenburg 1985d, fig. 81) and Kissonerga-*Mosphilia* (Peltenburg 1998, plate 31, 3), although these last two are stone and the GKB 96 one is clay. The GKB 96 figurine leg has its closest parallels at Kissonerga-*Mosphilia* (Peltenburg 1998, fig. 85, 9) although there are others which are similar; and the other two fragments from GKB 96 - which probably belong to the same figure - appear to be part of an anthropomorphic vessel, and are generally within the Chalcolithic tradition known from south-western Cyprus. DKM 96 also produced a hollow figurine fragment with many features common amongst Chalcolithic figurines, although there is no clear parallel for this artefact.

The ground stone shows divergence from Late Neolithic ground stone. For example, crushers appear for the first time during the Chalcolithic period, and pounders, mortars, anvil stones, polishers and hammerstones are more widespread than in earlier periods. Crushers appear at GKB 96, EDT 95 and AEM 95 as well as in parts of KYA 95 in significant numbers, and those at GKB 96 have strong similarities with those from Kissonerga-*Mylouthkia* (Elliot 1983, fig. 3. 5, 6), Kissonerga-*Mosphilia* (Peltenburg 1998, fig. 89. 18-20; 90. 3, 6, 7) and Lemba-*Lakkous* (Peltenburg 1985d, fig. 64. 15-17; 71. 3-6). It is possible that they indicate a new economic activity during the Chalcolithic, such as the exploitation of ore-bearing stones. If this were so, GKB 96 is ideally situated for smelting as it is very windy and must have had good timber resources as well as a water source. and thus the high number of crushers found there would make sense.

A picrolite pendant fragment discovered at GKB 96, and a picrolite adze and part of an axe from AEM 95 grid survey show links with the western part of the island. Peltenburg also collected picrolite at Ayios Epiktitos-*Mezarlik* (1985a: 102 and fig.5.8).

The only other ground stone worth commenting on especially is the grinders from KRN 95. These are rather different from those at the other sites surveyed, but are similar to the rubbers at Marki-*Alonia* (Frankel and Webb 1996, figs. 6.2-6.6 and plate 24). This agrees with the rather later date surmised for KRN 95, which has evidence of both Chalcolithic and Early Bronze Age activity.

8.4.3 Tomb Architecture

Two tombs at KRN 95 show Chalcolithic shapes (plates 5a, 5b, 5c) familiar from Kissonerga-*Mosphilia*, Lemba-*Lakkous*, Souskiou-*Vathyrkakas* (Christou, 1989 and Sotira-*Kaminoudhia* (Swiny 1985a:123, fig.4.2). This supports the suggestion that KRN 95 is a transitional Chalcolithic-Early Bronze Age site, probably associated with the large site at GKB 96 which was previously identified as Early Bronze Age despite the large amount of Chalcolithic pottery found during the 1996 survey. The cap-stone visible in plate 5a has parallels at Kissonerga-*Mosphilia*, where there are 12 of these graves dating to Middle Chalcolithic period 3A (Peltenburg, 1998:68 fig. 4.1:1 and 2).

8.4.4 External Contacts

No new evidence has been found of external contacts in the survey material. In general evidence is very slim, yet there are many elements of Chalcolithic culture which could relate to external contacts or immigration - for instance, the variety of burial practices and the appearance of the first copper artefacts. Todd has suggested that the tilted heads of the figurines are similar to those of the Aegean, commenting that " If Aegean influence is really reflected by these figurines, it is the only western influence that has been detected in the Neolithic and earlier Chalcolithic periods" (Todd:1986:21). Todd also describes a figurine with holes on the head which he suggests could be for the attachment of hair (Todd, 1991:8) - this is very similar to some Anatolian figurines. Gale says that at least one Chalcolithic artefact from Cyprus was made from non-Cypriot copper that may have come from north-western Anatolia (1991a: 57).

Other apparent similarities between western Anatolia and Cyprus at this time include burials and pottery. The site of Bakla Tepe, currently under excavation, has pithos burials in what is thought to be a Chalcolithic level (Vasif Sahoglu, pers. comm.). The presence in Chalcolithic Cyprus of a mixture of burial practices involving shaft graves, pits and pithos burials may indicate a mixed society or one with mixed influences, and a pithos burial is very different from previous burial practices on the island. Pottery from Elmali-*Karatas* offers some interesting comparisons. A number of motifs and pottery shapes from lower Bagbasi and Akcay are strikingly similar to those in Cyprus (for instance see

Eslick, 1992: plates 65:16; 77:32-33), ear-lug handles from Bagbasi are very similar to examples from GKB 96 (Eslick, 1992: plates 29-34) and there are many other examples. It is clear that there is scope for much more work in this area, but that is for the future.

8.5 Conclusions

The distribution of the Aceramic sites by period may show a pattern of topographical selection. Especially during the early years of the Cyprus Survey, various scholars such as Catling, Adavasio and Stanley Price tried to interpret the results to show that there was a settlement pattern. However, these interpretations were subject to bias due to the uneven distribution of survey which was carried out. Thus certain results regarding geographical choice of settlement area were really the result of the archaeologists' choice of survey area. There was also error due to mis-dating of sites. Now with more surveys in non-specific areas of the island and our understanding of the lesser known periods such as the Chalcolithic and Late Neolithic, more sites with a wider range of dates and location are being discovered. Archaeologists may know more than before but we still have lot more to learn. There are still gaps in our knowledge of all periods. The Aceramic period is dividing itself into early and late with the recently discovered artefact and faunal differences, and the unusual dates are pushing the start of the Aceramic further back. Perhaps the answers are obvious but are waiting to be discovered, or lie within the geographical choice of their settlements, or a combination of a few factors that makes a Cypriot Aceramic site different from or similar to the others.

There are very few known sites of the Late Neolithic period and even fewer are excavated. According to publications so far, they display great homogeneity in material culture, the main difference being the preference for certain types of pottery decoration. The finds from the surveyed sites are so limited, and the pottery so scarce, that there is little that can be said in comparison to the excavated sites, and no attempt can be made to place them within groups according to pottery preference. Surprisingly, the site with barely any pottery, and none at all that was dateable - GRP 97 - is the one with the widest range of data supporting the suggestion that it belongs in the Late Neolithic: the architecture, the pivot stone, grinders, axes and even the location are typical of the Late Neolithic period.

The sites of the Chalcolithic period seem to show considerable homogeneity. In particular, figurines typical of those found during excavations and surveys in south-west Cyprus have been found during the survey of northern sites. So far no picrolite cruciform figurines have been found - although a couple of fragments have been found in the past - but picrolite, which is also associated strongly with the south-west, has been found during the survey on Chalcolithic sites. The pottery motifs show a great deal of similarity, as well as some difference, and specialist analysis is now required if our understanding of the homogeneity of culture during the Chalcolithic period is to be extended.

Chapter 9

Conclusions and Suggestions for Future Research

9.1 Introduction

As explained in chapter 1, for 24 years large-scale and properly funded fieldwork by experienced archaeologists has been restricted mainly to the south of Cyprus. Moreover, during those 24 years a great deal of excavation and survey has been undertaken by teams from many countries. Due to a lack of funds and resources, archaeological fieldwork in the north has been restricted to small-scale rescue excavations, mainly of tombs uncovered during roadworks and house construction, and information about the Neolithic and Chalcolithic periods has not advanced as it has done in the south. The resulting lacuna, recognised by many archaeologists, needs to be filled. The problem for me has been how this could be done within the constraints of postgraduate research. In this thesis I do not claim to have found all the "unknown" answers, nor do I claim to have filled in the gap. However, I do stress the importance of carrying out fieldwork in the north as well as the south, and also the necessity of taking a fresh look at already known sites with the new evidence from the south in mind.

This survey project had four main aims:

1 - to re-investigate the prehistoric sites previously recorded during various survey projects in Kyrenia district;

2 - to define further the chronology of the sites and their phases in the north;

3 - to investigate whether the prehistoric cultures of Cyprus showed homogeneity in their cultural development;

4 - to attempt to find indications of multi-period and shifting and drifting settlement sites.

All of these aims have been realised to some extent. In the following pages I shall assess briefly how much of each aim has been achieved, and shall also consider the effectiveness of the methodologies used.

9.2 Achievements Concerning Aim 1

9.2.1 Re-location of Known Sites

Before I could re-investigate known sites, they had to be found. Using Stanley Price's Gazetteer (Stanley Price 1979) as my main guide, 28 sites were selected for survey on the basis of richness of artefacts and sufficient locational information. 22 of these were found and had surface finds; three were found but had no surface finds; a further three could not be found. Overall this represents a very good rate of re-discovery, as it is 25 years since the last attempt was made to relocate any of these sites, and there has been a substantial level of development in terms of the building of roads and homes in that period.

9.2.2 Location of Previously Unrecognised Sites

Two previously unknown sites were discovered - EDT 95 and GRP 97 - and in Karsiyaka several discrete sites were identified within an area which was known to have prehistoric remains. Considering that the identification of new sites was not a priority or a major aim of the project, this was a reasonable rate of new discovery - some of it accidental, some (as at Karsiyaka) the result of hard work.

9.2.3 Investigation of Sites

Once located, sites were surveyed by various methods according to the richness of the artefact scatter, the terrain, and previous research. Whatever method was deemed most appropriate, I carried out a substantial collection of surface material in order to pursue the other three aims of the thesis.

9.3 Achievements Concerning Aim 2

The further definition of the chronology of sites and of their phases in the north includes two main areas of work - gathering new data concerning settlement at different periods, and the closer dating of specific sites.

9.3.1 New Dating Information

TCD 96 has produced the most important new data in this respect, with the presence of plentiful obsidian as well as cattle. These two data sets permit the suggestion of a date half a millennium earlier than expected, based on comparisons with the site of Parekklisha-*Shillourokambos*, which has carbon dates as well as excavation data suggesting that its early levels pre-date classic Khirokitia culture by some time. Obviously direct dating of TCD 96 is required to make more definite claims, but the evidence so far is compelling.

The newly discovered site of EDT 95 offers evidence both of a probable Late Neolithic/Early Chalcolithic transition site, and of a site of these periods utilising a lower terrace of the Kyrenia mountains rather than the coast or the Mesarya plain. GRP 97 is another newly discovered site which is probably Late Neolithic, possibly with Aceramic levels below, this time on the coast. These two sites add to our knowledge of an under-represented period in Cypriot prehistory.

Several sites have been shown to have been incorrectly or incompletely dated in the past. GKB 96 was previously reported as an Early Bronze Age site, yet by far the majority of the material found during the survey is Chalcolithic. Some Early Bronze Age artefacts were also found, as were Late Neolithic artefacts, but the main occupation appears to have been throughout the Chalcolithic period. KYR 95 has long been recognised as a Late Neolithic site, but although artefacts were very scarce during my survey, several sherds suggest Chalcolithic occupation as well. KRN 95 cemetery has been reported as an Early Bronze Age site, yet I have found evidence both during the survey and during previous fieldwork at the site that typical Chalcolithic tombs also exist there, indicating that the site spans the two periods. The artefacts from the adjacent site, possibly a settlement, also appear to span this transition.

9.3.2 Additional Dating Information

There has been some interest recently in the dating of sites excavated at Kythrea and Vasilia earlier this century. Originally said to be Late Neolithic, it is now thought that they are Chalcolithic. During my survey of DCD 96 I found evidence to support the Chalcolithic dating of the site. KYA 95, which covered a large area, has been found to have sites of range of prehistoric periods within a small area, including probable Aceramic sites. The was disappointingly little with which to confirm the Chalcolithic date of the site at Harman Tarlasi, but nothing to deny it.

A study of the pottery from EDT 95 and AEM 95, when compared to that from Peltenburg's work in the region, assists in clarifying the phases of the Late Neolithic and Chalcolithic occupation in the area. The first two phases of Ayios Epiktitos-*Vrysi* are Late Neolithic while the latest phase is regarded as Early Chalcolithic and Ayios Epiktitos-*Mezarlik* as Middle Chalcolithic. This suggests that the straight band motif is very early Chalcolithic, not quite Late Neolithic, dating around 3800 BC. Peltenburg mentions that the motifs and the omphalos bases from Yrisma-*Karavas* are very similar to pottery from Kissonerga-*Mylouthkia,* a very early Chalcolithic site (Peltenburg,1985a). EDT 95 has the same oblique line motifs and omphalos bases. Working from this data it is possible to suggest that there is a chain of sites overlapping in their style and probably in their period. The chain is Yrisma-*Karavas*, Ayios Epiktitos-*Vrysi* (late phase), EDT 95 (probably early phase since the rest of the pottery is more like Ayios Epiktitos-*Mezarlik)* and Ayios Epiktitos-*Mezarlik.* Since Kissonerga-*Mylouthkia* is a Sotira-Erimi culture transitional period site, I suggest with some confidence that EDT 95 is also a transitional site of Sotira-Erimi culture.

9.4 Achievements Concerning Aim 3

The lack of work in the north in the past 25 years has led to questions concerning the homogeneity of culture during the prehistoric periods. The presence of a large Aceramic site at Khirokitia-*Vounoi* in the south, and only small ones in the north, could indicate that the south was predominant at that period. The differences in choice of pottery motif during the Late Neolithic were known to relate partly to geography, with combed ware more common in the south and red on white painted preferred in the north, therefore cultural homogeneity is in question. No recognised Chalcolithic site has been excavated in the north, although some have later been dated to that period and others were trenched. Little is therefore known for comparison with the large quantity of data from the south in recent years.

Survey data cannot be compared directly with excavated sites, yet interesting results have been possible. The Aceramic sites not only showed general similarities with those known across the island, but TCD 96 was linked especially by certain data with one other site which is a very early and is on the south coast. The Late Neolithic sites showed very little - GRP 97 appears to be very like Ayios Epiktitos-*Vrysi* but that is a regional similarity. The low level of pottery meant that I was unable to enter the ceramics debate or offer any data relevant to cultural homogeneity. The Chalcolithic material, on the other hand, shows definite links with what is known from the south, in terms of pottery, tomb architecture, figurine and ground stone. The figurines provide the closest parallels with the south, although the materials differ; the pottery also displays considerable homogeneity, but there are also pottery designs from GKB 96 and EDT 95 that are not known elsewhere, so there is also difference which requires further investigation. The presence of picrolite on northern Chalcolithic sites suggests contact with the south-west.

9.5 Achievements Concerning Aim 4

One explanation offered both for the absence of tell sites and for the late appearance of stratified society in Cyprus has been the shifting and drifting of settlements. With this is mind, an attempt was made recognise this feature, as well as the presence of multi-period occupation, through survey.

9.5.1 Shifting and Drifting Settlements

KYA 95 is the surveyed area most likely to represent shifting and drifting over a long period. The KYA 95 sites were found by extensive area survey rather than grid survey work, and while it is clear that the field walking carried out at KYA 95 is good for identifying where the artefacts are, it was difficult to date the sites without any artefact specialists. This made it less easy to determine whether the pattern seen on the ground was the result of shifting and drifting of settlements. Field walking will not provide such definite results as a grid survey because the modern boundaries of the fields determine where material is recorded from. These field boundaries are irrelevant to the boundaries of ancient sites, and thus may obscure their relationships.

GKB 96 is the only one of the four grid surveyed sites which could show drifting and shifting of settlements. Here the work on different ware types may show drifting and shifting, but it could also show differences in the pottery used in different households, and could also relate to differential usage of parts of the site. It is likely that only excavation can resolve these matters.

9.5.2 Multi-period Occupation

A number of sites were found to have multi-period occupation. The site of GRP 97 may be both Aceramic and Late Neolithic, a common combination despite the long break between these periods. Sherds which seem to be Chalcolithic were found at KYA 95 in addition to known Late Neolithic material. The new site of EDT 95 has Late Neolithic, Early Chalcolithic and Middle Chalcolithic pottery. KRN 95 appears to have both Chalcolithic and Early Bronze Age material at the *Merra* locality, and tombs of both these periods in the adjacent cemetery. GKB 96 was previously thought to be a single period Early Bronze Age site, but has now been shown to be mainly Chalcolithic with earlier Late Neolithic material also present. The existence of multi-period occupation at northern sites now seems to be well-established.

9.6 External Contacts

Although an assessment of external contacts was not an aim of the survey, it has been considered nevertheless. There have long been suggestions that the each of the periods under discussion was influenced by contact with the surrounding mainland. In the case of the Aceramic period the survey offers compelling new evidence from TCD 96 to add to that from the site of Parekklisha-*Shillourokambos*, still under excavation, that the early settlement of Cyprus was not just deliberate, but involved the introduction to the island of cattle, and that contact with the mainland was maintained over a long period, perhaps half a millennium.

The survey offers no new evidence of foreign contact in the Late Neolithic, so that the appearance of this culture is still surrounded with unanswered questions. The possibility that GRP 97 has both Aceramic and atypical Late Neolithic remains (that is, very little pottery was found) is of interest in this regard. No new evidence is available either for external contacts during the Chalcolithic period.

9.7 The Survey Methodology

In addition to considering how far the aims of the survey have been achieved, it is necessary to assess the suitability, advantages and disadvantages of the survey methods used.

While reporting on the Canadian Palaipaphos Survey, D'Annibale commented on "...the random nature of the archaeological survey procedure. While chipping stations were often identified during the initial survey, the collection units did not always land on them" (Rupp et al, 1992: 300). Other archaeologists have brought similar issues forward, such as the reliability of surface data for indicating what lies beneath the ground. Opinions differ: Simmons claims that "During fieldwork in south Lincolnshire it became apparent, at an early stage, that surface pottery does not move around the surface of the field as much as is generally imagined. In fact it is doubtful if potsherds, with the exception of a small proportion, stray from their original point of deposition" (Simmons, 1980: 82) ; but Peltenburg has voiced other concerns: "Excavations at Lemba cluster have shown that sites can be completely buried without trace in undisturbed terrain (Mylouthkia), that multi-period occupations, particularly involving horizontal shift, exist (Lemba) and that some underlying occupations are not represented in surface material (Lemba). Thus no matter how thorough the coverage, survey data can reflect only a partial picture (leaving aside questions of erosion) and that where sites are found, not all periods will necessarily be apparent" (Peltenburg, 1981: 35).

It was problems of this nature that led me to choose my survey methods carefully. It was clear that any random system of surface collection could produce biased results. The choice of total collection using a 5 x 5m grid meant that most bias should be eliminated. The size of grid was chosen because prehistoric sites tend to be small, it relates fairly well to house sizes, and seemed suitable for an attempt to detect shifting and drifting settlement, giving a reasonably tight area of distribution without burdening the surveyor with excessive work relating to establishing the grid and entering the data. It proved to be an excellent choice, giving a small enough unit for computerised analysis of artefact distribution while being large enough to set up quickly, and for data entry to be just about feasible within the time-frame of the survey season.

In order to reduce bias in the choice of area for survey, the grid survey of the most dense areas of artefact scatter was supplemented by extensive survey of the surrounding fields. This ensured that the presence of a site was not defined purely on the basis of certain types of artefact to the exclusion of others. This produced interesting results. At both AEM 95 and EDT 95 ground stone concentrations were found at some distance from the pottery concentrations. Without extensive survey these concentrations may not have been recorded, and both the extent and the nature of the site could have been regarded as substantially different. On a multi-period site, the presence of some material away from the apparent centre could be viewed as settlement drift, whereas it appears at these two sites to show differentiated activity areas, with activities associated with the ground stone tools (food preparation?) being segregated from the main domestic area (pottery). It is also important to note that compared with excavated sites, these settlements do not present a uniform distribution of artefacts, which suggests that excavations may have missed part of the settlement because they have concentrated on the areas where the pottery was most dense - this is something that excavators should take account of in future when planning to investigate a settlement, and some work should be done in advance on a detailed surface survey, and then on excavating at the margins of the settlement.

Overall, the survey methods used have been shown to be extremely useful. It is certain that this method of survey answers certain questions that excavation cannot, in particular those relating to patterns of the settlement that have largely disappeared due to erosion or post depositional processes, as well as the extent of site activity areas. However, some of the implications of the survey do need to be tested by excavation for a more complete comparison.

9.8 The Artefact Classifications

The absence of specialists able to data artefacts closely led to my adoption of different classifications than those commonly used. This is not felt to have been a disadvantage in most cases. Where the ground stone was concerned, enough comparative material has been published to enable similar terminology to be used when thought suitable. The use of a very detailed description of pottery wares led to a realisation that distribution analysis based on these types could offer very different information regarding household production, shifting and drifting of settlements, and differential use of areas of the site, which might not otherwise be possible. The few attempts of distribution graphs based on pottery wares showed how successful this approach could be, and there is certainly great scope for much more work than time permitted for this thesis. It is in the area of chipped stone that the lack of specialist knowledge was most disadvantageous, as the dates of several sites are unclear from other data and lithic analysis might resolve the issue. Overall, the lack of specialists was not a serious problem, but their presence would certainly have been helpful in defining periods and phases of occupation more closely, and would be beneficial on all survey projects.

9.9 Results of computer analysis

The use of computer programmes to generate distribution diagrams for artefacts proved to be much more complex and difficult than expected. The problems arose largely from the lack of software designed specifically for this type of analysis. However, the results have repaid the work put in. The decision to use interpolation has been vindicated in general, as it clearly gives a better impression of distribution using a 5 x 5m grid. With a 2 x 2m or even 3 x 3m grid a non-interpolating programme might have been successful. It is unfortunate that the low numbers of some artefacts meant that an interpolated diagram would be inaccurate, but the relevant information can be obtained easily from the data tables.

9.10 Future Research

During the survey two sites were investigated which are not only of great importance, but are endangered. Further investigation of TCD 96 and GRP 97 by both non-intrusive methods and excavation is an urgent priority. Plans are underway to have the obsidian from TCD 96 analysed, although there is little doubt of its general place of origin. Other sites covered by the survey which would repay excavation are EDT 95 and GKB 96, and an area survey around GKB 96 could be very informative.

It is clear from the results of my project that a wider survey project should be established to cover the whole country in the intensive and extensive way employed by me. While this is an enormous task, certain area are particularly under-surveyed, such as the Karpas, and the cave sites.

Survey is not yet well-developed in the north of Cyprus, yet there is a clear potential not just for a great acquisition of information, but for building on the methods used for my project. In particular, a combination of geophysical survey, contour survey, aerial photography and grid survey results, all based on the same grid size, could be overlain on maps for analysis in computer-generated images. Work on this is currently underway at Edinburgh University, and the results are encouraging.

9.11 Conclusion

Significantly important sites have been discovered during the survey that will shed light on our understanding of the Aceramic and Late Neolithic periods. Other sites such as EDT 95 and GKB 96 are also significant for providing fresh information about the Chalcolithic periods in the North and their connections with the south. A general aim of the survey work carried out in the north was to close the gap in our knowledge between the south and the north created by the intensive research carried out solely in the south for the past 24 years. At the beginning of this thesis I did not promise to fulfil this, but there is no doubt that the results of the survey reported in this thesis I have definitely started to close that gap. The type of survey carried out is ideal for retrieving information in a short time with limited funds. It is also valuable for intersite analysis and comparison with the excavated sites when final reports are published. Another important advantage of this survey method is the short time it needs to be analysed, and therefore a reduction in time to wait for publications. The possibilities and prospects of the survey method is immense, valuable and accurate. It is also more flexible than excavation and it can and it has answered questions that excavations can not.

Field work in two seasons brought two important issues. First is that there is a lot we need to learn about the island's forgotten part, and re-assessing the sites known prior to 1974 is essential. The second is that the survey brought to the attention of the Department of Antiquities and Museums the urgency of relocating sites, known only from survey, assessing them and ensuring their protection list of sites and monuments. However, this massive project is beyond the human and financial resources of the Department of Antiquities alone. In south Cyprus, this kind of work is carried out by the foreign missions with outside funding and staff. My project was carried out with minimal staff, equipment and funding, and achieved a great deal in a range of areas of interest.

Appendix A

Concordance of Place-names

Village	Catalkoy	-	Ayios Epiktitos
Locality	Dort Donum	-	Deurt Donum
	Dort Donum	-	Vouppa Louri
	Dort Donum	-	Vouppa
	Karaburun	-	Xylomandra
	Kadi Bahcesi	-	Pervolin tou Kadi
	Kaymakam Sirti	-	Phtana
	Kel Ali	-	Kel Ali
	Kirmizi Armutluk	-	Kokkini Appidhia
	Mezarlik	-	Mezarlik
	Vikla	-	Vikla
	Yolcati	-	Kavannos
River	Evlek Deresi	-	Pradisos Potamos
Village	Edremit	-	Trimithi
Locality	Altincik	-	Chrysotrimithissa
	Haci Ismail	-	Hadji Ismail
River	Pinar	-	Vrysi
Village	Karsiyaka	-	Vasilia
Locality	Dag Gulu	-	Triantaphylia
	Dag Gulu	-	Ambeli
	Dervispasa Zeytinligi	-	Lithari
	Gumusalan	-	Hilliomodhousa
	Hudaverdiler	-	Myliades
	Harman Tarlasi	-	Harma Tarlasi
	Karaogullari	-	Karaolies
	Koca Tarla	-	Pyrgos Triantaphylia
	Koca Tarla	-	Phyrgos
	Ucdereler	-	Evriman
Mountain	Kavanc	-	Kornos

Village	Karaman	-	Karmi
Locality	Kusluca	-	Phunji
Village	Beylerbeyi	-	Bellapais
Locality	Kumbaraci	-	Vasiliki
Village	Kayalar	-	Orga
Locality	Eski Bag	-	Paliambelia
	Eski Bag	-	Ambeli
	Keskinkaya	-	Kourvelia
Village	Alsancak	-	Karavas
Locality	Karamulla	-	Pikron Neron
	Yrisma	-	Yrisma
Village	Arapkoy	-	Klepini
Locality	Troulli -	-	Troulli
Village	Tatlisu	-	Akanthou
	Kucuk Erenkoy	-	Akanthou
Locality	Ciftlikduzu	-	Arkosyko
	Kucukduz	-	Kalikrini
	Kuyu Mevkii	-	Lakkous
	Seslikaya	-	Villourin
River	Kotu Dere	-	Kokkinayi
Village	Goceri	-	Pileri
Locality	Koca Belenk	-	Koja Belenk
	Profitis Elias Pyrgos	-	Profitis Elias Pyrgos
	Simsirlik	-	Shimshirlik
Village	Pinarbasi	-	Kirni
Locality	Merra	-	Merra
	Kirmizi Belenk	-	Kirmizi Beleuk
	Konno Arasi	-	Konno Arasi
	Yere Oldu	-	Yere Oldu

Village	Degirmenlik	-	Kythrea
Locality	Cukurdere	-	Ayios Dimitrianos
	Dumlupinar	-	Ayios Dimitrianos
	Dumlupinar	-	Aspropotamos
	Kemer Mevkii	-	Kamares/Kamara
Cave	Phyleri -	-	Phyleri
Village	Kozan	-	Larnaka tis Lapithou
Village	Gecitkoy	-	Panarga

Appendix B

Place and Locality Names

Amongst archaeologists there are discussions on the changes of the place names, both north and south, and the difficulty it may bring to relocating sites or to recognition of which site is the same as which. Throughout my dissertation I have provided information about a variety of known names, and have included a place-name concordance (Appendix A).

The names of places change as people move and/or the land is taken over by new powers. Cyprus is no exception; it has been a colony to many and not only have its place-names changed, its name as an island has changed too. Studying the origins and changes of place-names is a separate study on its own, but must be undertaken in a spirit of genuine enquiry, not as a political exercise. It is important to know the language in which a place name was coined. There are at least nine languages which have left their mark on Cyprus's place-names: Arabic; Armenian; English; French; Greek; Hebrew; Italian; Maronite and Turkish - and probably more. A study of place-names by linguists specialising in these languages would certainly throw light on their meanings beyond Turkish and Greek claims, as many of the original names have been obscured by alterations to suit speakers of other languages.

In the Istanbul archives there is a set of maps made during the Ottoman period but it is incomplete (Halil Giray, pers. comm.) The first islandwide registration of locality names with maps was done in the early 1900's in Cyprus, but as Held points out, surveyors were encouraged to select names arbitrarily from a list of toponyms, to avoid cluttering the maps with an excessive number of place-names (Held, 1992: 16). A recently acquired colony of the British Empire, many of the place-names were Turkish, introduced by the population settled from Anatolia to all over the island. However, the Ottoman Turks did not re-name all places: some names were inherited from the European domination of the late 10th to late 16th Centuries, others retained Byzantine or earlier Greek forms, and some seem to go back even earlier. These place-names were recorded by the Ottomans and many were not changed for the 314 years of their rule. Under the British, Cyprus was seen as essentially Greek, and this coloured their approach to place names: many were recorded only under a Greek form; others were Hellenised or even "corrected" to standard classical usage after many centuries. For instance, Paphos was known as Baf or Bafou from at least the 2nd Byzantine period until the 20th Century. This was a very different approach to that of Pococke, who wrote "though Greek is their mother tongue, they do not so much as understand the ancient Greek of the new testament, tho' the modern Greek differs very little from it; but in Cyprus the Greek is more corrupted than in any other islands, as they have taken some words from the Venetians whilst they were among them. It is notwithstanding a sweet language, but they speak it very fast." (Pococke 1743 in Cobham 1908: 234).

Pococke is a traveller who mentioned many place names that are not in use today and are not of Greek origin, but of corrupt Frank-Turkish and Turkish. For example the river currently named Pedios is recorded as the River Kunrish (now the Kanli dere); Degirmenlik/Kythrea is recorded as Cherkez, Bellapaise as Telabaise; and Girne/Kyrenia as Gerines; while the name Lapta was in use for Lapithos (Pococke, 1743). Other travellers of the time also give alternative names, especially for Degirmenlik/Kythrea - Maritis called it Cirga (Maritis in Cobham 1971), and

Drummond recorded the Frankish name of La Quercherie among others (Drummond in Cobham 1908).

The Turkish Cypriot population in Cyprus had a disadvantage concerning village names when the British scholars and travellers arrived, the time published place-names first occur. The British, as the European travellers before them, preferred lodging and mixing with Greek Cypriots, mainly because they were Christians, and also because these scholars could communicate with their ancient Greek language knowledge, while they rarely understood Turkish. Turkish being a non-Indo European language, foreigners often wrote it incorrectly, going by the general sounds and mis-spelling the names, all of which have meanings. Another disadvantage that contributed to the loss of Turkish place-names in publications is that the Turks at the time used the Arabic script, which few Europeans could read, and few Turkish Cypriots could dictate them in the Latin alphabet.

Ignorance of Turkish continues amongst those who claim to make a study of these things. Goodwin, who makes it clear repeatedly that his interest is in recording Greek place-names and proving the Greek origin of Cypriot place-names (Goodwin 1985), makes absurd mistakes, suggesting rather similar Greek words as possible origins of names which are straightforward Turkish or Turkish Cypriot dialect (one example is Dasliyaka, stony place, a corruption of Tasliyaka in standard Cypriot usage). While he details the earliest known record of any place-name of Greek or European origin, Turkish place-names in use in the north of Cyprus as merely noted as "not new", in reference to the claim that new names have been given to all the villages in an attempt to eliminate evidence of Greek culture. Many of these Turkish names go back for four centuries.

Held, who attempted to use locality names referring to the Forty Saints, St Phanourios (and many variants) and dragons, to find pygmy hippo fossil sites, failed to consider languages other than Greek. One known fossil site is at Degirmenlik/Kythrea. Kythrea became the official name of this village only around 1930. As early as the eighteenth century and as late as 1928 it is referred to, amongst other things, as Cirga or Kyrka. Kirk is the Turkish word for forty, and it seems very likely that this relates to the presence of pygmy hippo fossils in the village.

The elimination of Turkish place-names was carried on under the Republic of Cyprus especially after the December 1963 separation of the two communities. This often included changing non-Turkish names of Turkish Cypriot villages abandoned in the troubles. Thus Kataliondas and Analiondas are the same place - a Turkish Cypriot hamlet abandoned in the early 1960's and officially re-named Kataliondas by the Greek Cypriot authorities. After the second separation of the two communities to their own sovereign areas in 1974, the TRNC map office committee set out to standardise the place names within its borders. The names were changed in a variety of ways according to a number of criteria: reinstating original sixteentth century Turkish names; continuing use of a Turkish name existing in parallel with a Greek one; as direct translations from Greek to Turkish; as a description of the toponomy of the area; villagers suggestions; and sounding similar to the previous names.

It is inevitable that place-names will be altered to suit those who use them. It has happened for centuries in Cyprus, and is continuing. At present place-names in the south of Cyprus are being altered to Athenian Greek spellings, eliminating Cypriot dialect. Rather than make the change of place-names a political issue, it is more important that archaeologists, and others who use place-names, endeavour to record all known place-names whatever the language, to ensure that the information they contain, both archaeological and about the people who have lived there in historical times, is retained.

Appendix C

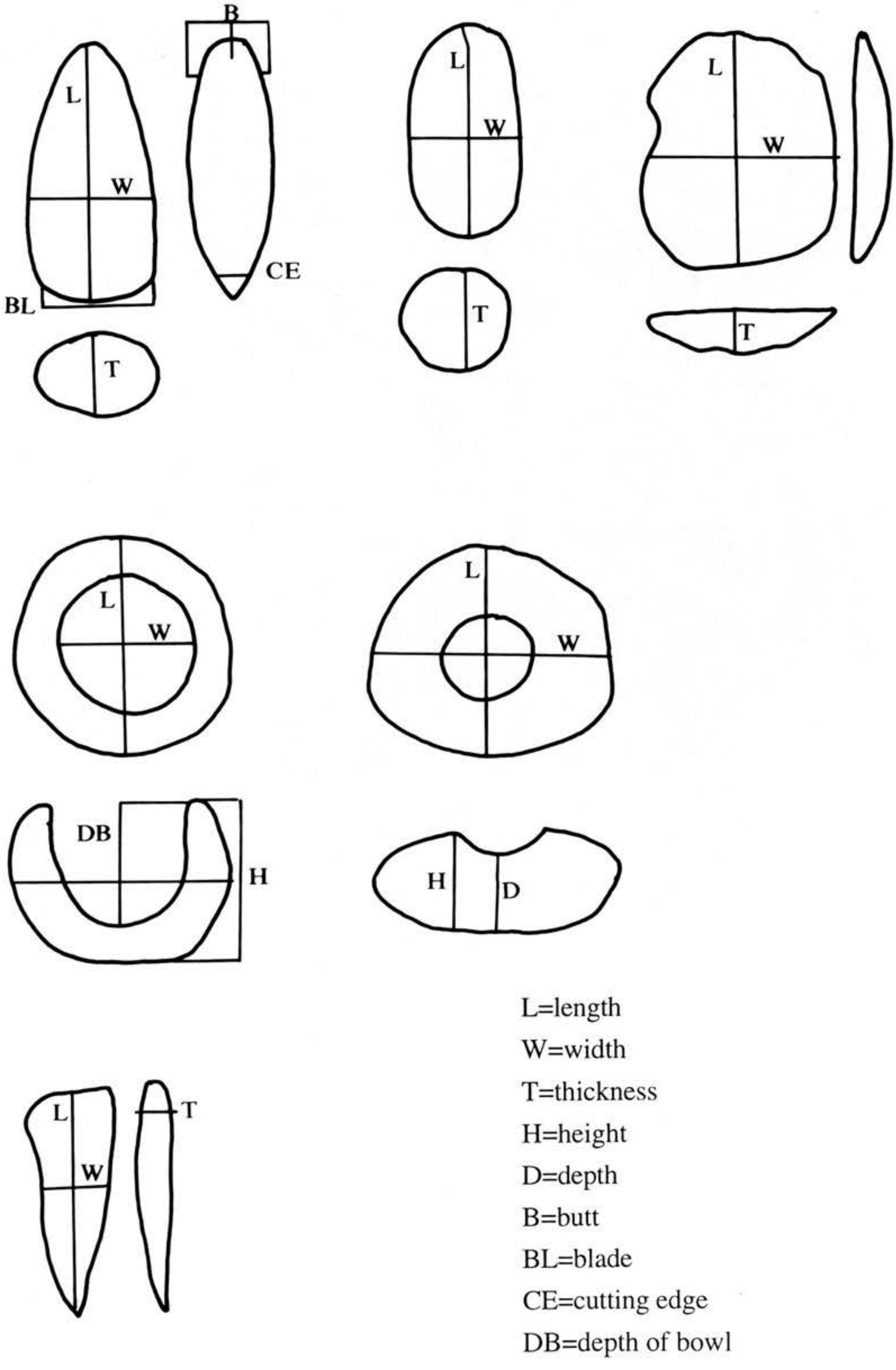

Chart showing position of measurements taken on various types of artefact.

Appendix D

The Pottery Ware Abbreviations.

Standard ware types

cpw – coarse painted ware

cw – coarse ware

r on r - red on red

r&bp - red &black polished

rb/b - red and black stroke burnished

rm – red monochrome

rl - red lustrous

rs - red slip

rwp - red on white painted

wp – white painted

Ware Types used

(Standard ware types are in brackets where applicable)

b

bb- black burnished (black burnished)

boc-brown on cream (rm?)

bcp- brown on cream painted (rm)

bm- brown mono (rm)

bmoc-brown mono on cream (rm?)

bmobc- brown mono on brown cream (rm?)

bpp- brown on pink painted (rwp)

bmcoarse- black mono on coarse

bs- brown slip (rs)

bsc- black slip on cream

bogc- brown on grey cream (rm?)

b/bmogc- brown/black mono on grey cream (rm?)

bg- brown grey

blackmogc- black mono on grey cream

brush stroked- brush stroked

b/lboc- black/light brown on cream (rm?)

blackm- black mono

b/bycp- brown/black yellow cream painted (rwp)

b/bmoyc- brown/black mono on yellow cream (rm?)

b/bmoys- brown/black mono on yellow slip (rm?)

b/bm- brown/black mono (rm)

bc- brown coarse (rm?, cw)

bmogc- brown mono on grey cream (rm?)

blackmooc- black mono on orange cream

boy- brown on yellow (rm?)

blackmog- black mono on grey

bmolbc- brown mono on light brown cream (rm?)

b/gmogc- black/grey mono on grey cream

blackmogc- black mono on grey cream

blackmoyc- black mono on yellow cream

boyc- brown on yellow cream (rm?)

Buffrocoarse- buff red on coarse (rm)

bycp- brown on yellow cream painted (rwp)

b/gm- black grey mono

blackgcp- black on grey cream painted

bgmoc- brown grey mono on cream (rm?)

bgm- brown grey mono (rm)

Brownmcoarse- brown mono on coarse (rm, cw)

bomocp- brown painted on orange mono on cream (r on r ?)

b/bcp- black brown on cream painted (rwp)

c

cc- cream coarse (wp, cw)

c-coarse (cw)

cm-cream mono (wp)

cream- cream (wp)

cs- cream slip (wp)

com- cream orange mono (wp)

cos- creamy orange slip (wp)

cream lustrous- cream lustrous

csoom- cream slip on orange mono

cgm- cream grey mono

d

dboc- dark brown on cream (rm?)

dbmoc- dark brown mono on cream (rm?)

db-dark brown **same as** dbm- dark brown mono (rm)

dbcp-dark brown on cream painted (rwp)

dbpc- dark brown painted on cream (rwp)

dbogm- dark brown on grey mono

d-dark

dboc- dark brown on cream (rwp)

drm- dark red mono (rm)

drwp- dark red on white painted (rwp)

dbm- dark brown mono (rm)

dom- dark orange mono (rm)

dbmogc- dark brown mono on grey cream (rm?)

dr/bm- dark red/black mono (rm)

dbgcp- dark brown on grey cream painted (rwp)

dg/bm- dark grey/black mono

dg/bycp- dark grey/black painted on yellow cream (rwp?)

dg/bmogc- dark grey/black mono on grey cream

drmodbgc- dark red mono on dark brown-grey cream (rm?)

db/gm- dark brown/grey mono (rm)

db/bcp- dark brown on light brown cream painted (rwp)

dbgoc- dark brown grey on cream (rm?)

dgcp- dark grey on cream painted

dg/bmoyc- dark grey/black mono on yellow cream

dgycp- dark grey on yellow cream painted

dggcp- dark grey on grey cream painted

dgmolgc- dark grey mono on light grey cream

domogc- dark orange mono on grey cream (rm?)

drmooc- dark red mono on orange cream (rm?)

dbmodbc- dark brown mono on dark brown cream (rm?)

dgmoc- dark grey mono on cream

dbgp- dark brown on grey painted (r on r)

dbgmoc- dark brown grey mono on cream (rm?)

db/gm- dark brown to grey mono (rm?)

dg/b- dark grey/black

db/rmoc- dark brown/red mono on cream (rm?)

dbgm- dark brown on grey mono (rm?)

db/gcm- dark brown/grey cream mono (rm?)

doooc- dark orange on orange cream (rm?)

db/bm- dark brown/black mono (r&bp)

dbgcp-dark brown on grey cream painted (r on r)

db/gmoyc- dark brown/grey mono on yellow cream (rwp?)

drblackm- dark red black monochrome (rm)

dbbmocp- dark brown painted on brown mono on cream (r on r)

db/rcp- dark brown and red painted on cream (rwp)

drmc- dark red mono on coarse (rm?, cw)

dbcoarse- dark brown on coarse (rm)

drmopgcoarse- dark red mono on pinky grey cream on coarse

g

gbmogc- grey brown mono on grey cream

gc- grey cream **same as** gcm- grey cream mono

gmopc- grey mono on pink cream

gclustrous- grey cream lustrous

gmoc- grey mono on cream

g-grey

gmogc- grey mono on grey cream

gobmoyc- grey orange brown mono on yellow cream

l

lboc- light brown on cream (rm?)

lboyc- light brown on yellow cream (rm?)

lbocm- light brown on cream mono (rm?)

lbmoc- light brown mono on cream (rm?)

lbm-light brown mono (rm)

losoc- light orange slip on cream (rm?)

lbs- light brown slip

lbmoyc- light brown mono on yellow cream (rm?)

lbolbc- light brown on light brown cream

lomoyc- light orange mono on yellow cream (rm?)

l- light

lomoc- light orange mono on cream (rm?)

lbmolpc- light brown mono on light pink cream (rm?)

lo- light orange (rm)

llbm- light light brown mono (rm)

lbmlustrous- light brown mono lustrous (rl)

lcc- light cream coarse (cw)

lboy- light brown on yellow (rm?)

lom- light orange mono (rm)

lo/bogc- light orange/brown on grey cream

lbgoyc- light brown grey on yellow cream (rm?)

lbomoc- light brown orange mono on cream (rm?)

loc- light orange cream

lbgm- light brown grey mono (rm)

lbyc- light brown yellow cream

lbmopc- light brown mono on pink cream

lbcoarse- light brown on coarse (rm, cw)

lgmoyc- light grey mono on yellow cream

o

omoc- orange mono on cream (rm?)

om-orange mono rm

opm- orange pink mono (rm)

omolc- orange mono on light cream (rm?)

omoyc- orange mono on yellow (rm?)

obmoc- orange brown mono on cream (rm?)

o/dbmoc- orange/dark brown mono on cream (rm?)

omos- orange mono on orange slip (rm?)

orm- orange red mono (rm)

ocp- orange on cream painted (rwp)

osoco- orange slip on cream orange

osoo- orange slip on orange

omoo- orange mono on orange

osoc- orange slip on cream

omopc- orange mono on pinky cream (rm?)

opc- orange pinky cream (rm?)

omolb- orange mono on light brown (rm?)

omopc- orange mono on pink cream (rm?)

oscoarse- orange slip on coarse (cw)

omcoarse- orange mono on coarse (cw)

ooyc- orange on yellow cream (rm?)

omogc- orange mono on grey cream (rm?)

omopyc- orange mono on pink yellow cream (rm?)

obmoyc- orange brown mono on yellow cream (rm?)

obooc- orange brown on orange cream (rm?)

omooc- orange mono on orange cream (rm?)

oblackm- orange black mono (rm)

opcp- orange on pinky cream painted (rwp)

ocm- orange cream mono (rm)

p

p- pink

pm- pink mono

pcc- pinky cream coarse (cw)

pws- pinkish white slip (wp)

pc- pinky cream (rm?)

pcoarse- pink coarse (cw)

pomoyc- pinky orange mono on yellow cream (rm?)

pcs- pinky cream slip (wp)

pbm- pinky brown mono (rm?)

prmodgc- pinky red mono on dark grey cream

r

rwp-red on white painted (rwp)

rrc-red red coarse (r on r, coarse)

roc - red on cream (rwp?)

rcp-red on cream painted (rwp)

rr- red red

rm-red mono (rm)

rmoc-red mono on cream (rm?)

rbmogc- redy brown mono on grey cream (rm?)

rmopc- red mono on pink cream (rm?)

rmoloc- red mono on light orange cream (rm?)

rcp- red on cream painted (rwp)

rrp- red on red painted (r on r)

rpp- red on pink painted (rwp)

ryp- red on yellow painted (rwp)

rop- red on orange painted (r on r)

roc- red on cream (rm?)

rocc- red on cream coarse (rm?)

rom- red on orange monochrome (r on r)

rmc- red mono on coarse (rm, cw)

rsm- red slip mono (rm)

rsop- red slip on pink (rm?)

rsoc- red slip on cream (rm?)

rmoyc- red mono on yellow cream (rm?)

rmolbc- red mono on light brown cream (rm?)

rpcp- red on pink cream painted (rwp)

rmooc- red mono on orange cream (r on r ?)

rbm- red brown mono (rm)

rmog- red mono on grey (rm?)

rbmopc- red brown mono on pinky cream (rm?)

rbmooc- red brown mono on orange cream (rm?)

rocp- red on orange cream painted (r on r)

romoyc- red orange mono on yellow cream (rm?)

rmolc- red mono on light cream (rm?)

rrmc- red red mono on coarse (r on r, cw))

rdbm- redy dark brown mono (rm)

rbocp- redy brown orange on cream painted (rwp)

rbcp- reddy brown on cream painted (rwp) rblackm- red black mono (rm)

rbbb- redy brown black burnished (rb/b)

rb/bm- redy brown/black mono (r&bp)

rbcp- red and black on cream painted (rwp)

rmoo- red mono on orange (r on r?, rm?)

v

vdbm- very dark brown mono(rm)

vdgoyc- very dark grey on yellow cream

y

y-yellow (wp)

ycm-yellow cream mono **same as** yc- yellow cream

ygc- yellow grey cream

ycs- yellow cream slip

yccoarse- yellow cream on coarse (wp)

Appendix E

EDT 95 rims – details of illustrated sherds

Drawing no.	Grid no.	Weight	Thickness	Diameter	%
1	3H	28	0.9	13	10
2	3C	36	1	27	5
3	4B	24	0.7	10?	15
4	4B	26	1		
5	3A	6	0.9	9	8
6	4D	6	0.6	16	6
7	4D	12	0.7	15	8
8	4D	22	0.7	14	5
9	3E	6	0.7	12	8
10	2H	6	1	8	12
11	4E	8	0.6	13	8
12	2F		0.6		
13	2F		0.8	10	10
14	2F	2	0.7		
15	3B		0.7	10	8
16	3B		0.9	15	8
17	3B		0.7	11	5

Appendix F

Animals Bones from Tatlisu-Ciftlikduzu 1996

This 'report' is concerned with the identification of the diagnostic skeletal elements of large- and medium-sized mammals from the assemblage. I have ignored ribs, vertebrae, long-bone shaft fragments and tooth fragments - all of which are less diagnostic - and anything else which does not provide secure information.

The cervids are believed to be fallow deer (Dama dama mesopotamica) as opposed to red deer (Cervis elaphus), both on the basis of criteria described by Lister, A. (1996), [The Morphological Distinction Between Bones and Teeth of Fallow Deer (Dama dama) and Red Deer (Cervus elaphus), International Journal of Osteoarchaeology Vol 6: 119-143], and size.

Measurements follow von den Driesch, A. (1976), A guide to the measurement of animal bones from archaeological sites, Harvard University: Peabody Museum Bulletin 1.

Element	portion	side	fusion/age	taxon	other	measurement
TCD 96 Trench						
Humerus	distal	LHS	fused	fallow deer	burnt	Bd: 43.6 BT: (38.8) HTC: 22.0
TCD 96 Trench 2						
Antler	base	?	young	fallow deer	end gnawed (possibly by deer itself??)	
Humerus	distal	LHS	fused	sheep		Bd: 33.0 BT: 30.8 HTC: 15.2
Max M1/M2	complete	RHS	adult	sheep/gpat		
Femur	proximal	RHS	fusing	sheep/goat		

Tibia	distal	RHS	fused	pig/boar	end burnt	Bd: 30.2 Dd: 26.2
Tibia	distal	LHS	fused	fallow deer		Bd: 34.1 Dd: 25.0
Metapodial	distal	?	fused	pig/boar		
Metapodial	distal	?	fused	pig/boar	lateral metapodial	
2nd phalanx	complete	-	fused	cattle	fine cut marks on anterior side: skinning?	Bp:35.1 GL: 47.5 SD: 29.3 Bd: 31.6

TCD 96 Trench 3

Astragalus	complete	RHS	-	pig/boar	very eroded	
Maxilla	fragment	LHS	-	pig/boar	and tooth fragments	
Maxilla	fragment	RHS	sub-adult	pig/boar	P4, M1, M2, M3 erupting (hence sub-adult)	M1 GL: 14.5 M1 GB: 11.7 M2 GL: 17.0 M2 GB: 14.9
Mandible	fragment	RHS	-	sheep/goat	P2, P3	
Maxilla	fragment	RHS	-	pig/boar		
Femur	proximal	LHS	unfused	sheep/goat		
Humerus	fragment	LHS	young	pig/boar	burnt	

Calcaneum	complete	RHS	unfused	sheep/goat		
Maxilla fragment		RHS	-	probably fallow deer	M1, M2	M1 GL: 19.5 M1 GB: 19.4 M2 GL: 18.5 M2 GB: 18.1
Metacarpal	distal	RHS	fused	fallow deer		Bd: 35.9 Dd: 21.5
TCD 96 Mound 3						
Metatarsal	proximal	LHS	fused	cattle	broken in 2 and burnt	Bp: 50.9 Dp: -
TCD 96 Trench 4						
Tibia	distal	RHS	fused	sheep/goat		
Radius prox. frag.		RHS	fused	cervid (deer)	can't identify exactly - fragment too small	
Metacarpal	proximal	LHS	fused	sheep/goat		
Pelvis	acetabulum	RHS	fused	fallow deer		
TCD 96 Trench 5						
Femur	proximal	LHS	fused	fallow deer?		Bp: 66.4 DC: (27.8)
Mandible		LHS		fallow deer	P4, M1, M2, M3	L P4-M3:72.9 L P4: 12.5 B P4: 9.0 L M3: 23.3

						(on occl. surf.) B M3: 9.8
Antler	fragment	?		cervid	too fragmentary	
Astragalus	complete	LHS	adult	fallow deer		GL1: 44.0 Glm: 40.6 Dl: 24.4 Dm: 24.9 Bd: 28.6
Astragalus	complete	RHS	adult	fallow deer		GL1: 41.1 Glm: - Dl: 23.6 Dm: 24.2 Bd: 28.0
Calcaneum	fragment	RHS	?	fallow deer		

Dr Louise Martin
January 1997

Appendix G

GKB 96 rims - details of sherds illustrated in figures 191-202

Drawing no.	Grid no.	Ware Type	Weight	Thickness	Diameter
Figure 191					
1	19D	omoc		0.5	12
2	7J	bm	34	1.1	6
3	4K	bmoc	12	0.7	20
4	43I	rm	6	0.6	13
5	13D	rm	24	1.2	26
6	13K	rm	10	0.7	12
7	10K	om	8	1	18-24
8	19M	cm	2	0.7	6
9	38D	rmoc	14	1.1	16
10	39G	omoc	10	0.8	2?
11	10G	omoc	26	10	17
12	7E	rmoc	24	0.8	28
13	21E	rcp/rm	12	1	24
14	12K	rm	8	0.9	22
15	9A	rm/rwp	6	0.7	15
16	6J	rm/cream	48	1.2	20
17	8A	bm	16	0.8	18
18	13E	rmycs	34	1.1	12-19
19	14J	rmoyc	22	0.9	27
20	14J	rm	14	1	13-24
21	14J	rmoyc	14	1.2	22
22	24B	dbycp	46	1.3	28
23	17D	omoc	20	1.65	21+
24	18H	rcp	14	0.8	13
25	22F	omoyc	14	1.2	24
26	11D	c	16	0.9	4
Figure 192					
27	19E	bluegrey	18	0.8	
28	24D	dbcp	14	0.8	19
29	24D	dbmoc	12	0.9	
30	22D	rrc	74	1.15	
31	22G	ycm	8	0.8	
32	23I	bm	34	0.9	26
33	23I	lbmcoarse	16	1.1	
34	13I	bm	82	1.8	
35	13I	blackm/rm	14	0.9	23
36	16I	cm	8	0.7	
37	5I	bcp	12	0.8	14
38	15K	rmoc	22	0.8	6

39	5J	rm	8	0.7	14+
40	39E	bmoc	34	0.9	
41	39E	lbmoc	16	0.65	30+
42	29I	bm	14	1.2	2
43	33C	omopc	14	0.95	
44	34E	omoyc	20	0.9	28
45	44J	lrmoc	12	1	22
46	37E	rm	10	0.7	38
47	36I	-/lmb	34	0.9	16
48	38E	bm/om	8	0.75	28
49	42C	c	24	1.6	38
50	5K	rm	26	0.8	5
51	11D	rm/cm	8	0.65	14
52	11D	rm	12	1	22
53	4J	rmoc	11	1.1	28
54	16C	rmoyc	10	0.75	28
55	16C	lbmoc	10	0.9	12
56	41B	c	88	1.4	28
57	46D	rmopc	30	1	16

<u>Figure 193</u>

58	12C	omocs	14	0.8	20
59	12C	rmoc/rcp		0.7	12
60	14G	rmocs	54	1.2	27-28
61	14G	bmoys	28	1	14
62	14G	bcp	6	0.8	10
63	14G	rm	4		13
64	12A	rmoc	26	1.1	
65	12K	lbmoc/rmoc	14	1.2	
66	9A	rm	16	1	25
67	23H	rm	14	0.7	
68	23H	omoc	6	0.7	12
69	7B	cm	28	1.3	
70	19A	rcp/rm	14	1	28
71	16J	cc	66	1.4	25
72	8K		36?	1.5	18
73	8K			1.1	28+
74	7I	rm	12	1.1	
75	7I		24?	0.9	26
76	17I	rm	14	1	27
77	17D	rmoc	14	0.9	19
78	18H	rm	8	1	24+
79	20D	rm	6	1.1	18
80	20D	rm/bb	6	0.6	
81	22F	db/rmogc	6	0.7	22
82	11D	rmoc	6	1.15	

Figure 194

83	11D	rmoc	12	0.7	28
84	18G	rr	16	0.85	16
85	12C	rmoc	8	0.8	14
86	15F	dbcoarse	10	0.8	14
87	20H	oocm	4	0.7	18
88	17F	rm	8	0.8	16-20
89	29D	dbm	12	0.9	14
90	29D	lbm	8	0.9	18
91	29D	bm	4	0.7	26
92	27J	rmop/dbm	36	0.9	
93	30I	rm	12	0.8	16
94	30I	c	16	0.9	27
95	30D	bm/rm	232	1.75	28
96	30K	cgm	18	0.9	18
97	30K	rm	8	0.75	20
98	30K	rm	6	0.65	19
99	41B	rm/gm	6	0.6	13
100	30G	bbm	8	0.8	14
101	42E	rm	4	0.6	24
102	29J		36	1.3	28+
103	45B	bm	14	1.1	26
104	42H	rmoc	12	1	21
105	27I	lbmoc	8	0.8	21?
106	27C		26	0.9	10?
107	27K	rmoc	16	1	16
108	27K	bmoc	14	1	27+
109	27K	rmoc/gc	8	0.8	16

Figure 195

110	27K	rm	4	0.7	
111	41I	omoc	54	1.6	
112	41I	rm	6	0.9	
113	41I	rm	6	0.6	
114	32B	rm			22
115	32I				28+
116	36E	bm	84	1.8	16
117	36E	dgmolgc	66	1.4	2
118	37M	rm	14	0.7	14
119	37L	db-gm	24	1.15	18+
120	37L	rbm	8	0.8	14
121	42K	c	10	1.35	20
122	42E	bmogc	54		25
123	42D	rycp/ygc	16	1	9

124	43L	cc	46	1.3	28
125	45E	drm	12	1	
126	45C		24	1.1	21
127	45C		16	0.9	9
128	46D	rmopc	30	1	16
<u>Figure 196</u>					
129	38E	orm/pcs	20	1	3
130	38E	bm	6	0.85	
131	42C	c	14	1.05	38
132	42C	dbmogc/bmoyc	8	0.7	29
133	22J	rm	2	0.6	18
134	22J	rmolbc	24	0.8	
135	5K	brm	6	0.7	
136	5K	brm	26	1	36
137	5H	rmoc	21	0.9	34
138	5H	rm	4	0.6	28
139	5H	rm	4	0.6	28
140	5G	rm/rcp	14	1	23
141	5G		5	0.6	26
142	35H	pc	35	0.85	38
143	15H	dbmoc/rmoc	22	1	20-28
144	7J				30+
145	7J	rm	12	1.15	
146	7J	rm	10	1	40
147	22H	rm	12	10.8	28
148	22H	lbmoc/yc	10	0.9	24-28
149	14M	c	4	0.7	22
150	32J	omoc	18	0.8	36
151	4K	rrc	14	1.4	
152	4K	bmoc	10	0.7	20
153	4K	om	8	0.7	16
154	4K	omooc	2	0.7	18
<u>Figure 197</u>					
155	10E	omopc	50+	1.1	38
156	19H	bmoc/cm	20	0.8	28
157	43I	rm	34	0.7	38
158	11I	lboc	26	1.2	42+
159	11I	dboc/rm	12	0.7	38
160	19J	omoc		2	23
161	7F	rm		0.8	26
162	21C	lbmoc	34	1.5	26
163	21C	lmboc	20	1.1	
164	6I	bm	12	0.75	
165	6I	rm	32	1.2	
166	43H	rm/gc	12	0.7	24
167	13K	rmogc	8	0.7	12

168	13K	rm	4	0.6	12
169	10K	rm	14	0.8	12
170	13J	om	14	0.8	1.5
171	38J	db-bm	4	0.6	18
172	7A	rsm	36	0.7	18
173	11L	rmoc	24	1.05	28+
174	13L	dbmoc	20	1.2	28+
175	6H	rmocs	12	0.85	16
176	6H		6	0.8	13

Figure 198

177	36C	bm/cream	28	1.1	42+
178	33J	omooc	56	1	38+
179	33J	rm	26	1	30+
180	38C		54	1.4	30+
181	34G	rm	70	1.9	28+
182	29I	rm	104	1.7	30+
183	33C	rm	10	1.1	30+
184	33C	rm	20	1.1	38+
185	36F	rm	18	0.8	34
186	36F	dbmoc	18	1.25	23
187	36F	bm	26	0.9	42
188	27J	omoc	10	0.8	12
189	45D	rmoc	8	0.8	65
190	27L	lbgm	60	1.4	42
191	27L	rmoyc	36	0.9	40

Figure 199

192	27L	omoyc	0.9	26	
193	27L	rm	8	0.7	42
194	27L	rmoyc	4	0.7	36
195	27L	bm	28	1.1	22-28
196	36I	rrm	6	0.7	12
197	33I	omoc	14	0.95	30
198	33I	rm	8	0.85	19
199	33I	rm	16	0.75	42+
200	38F	om/cl	4	0.7	26-28
201	38F	cream	4	0.7	
202	38F	omoc/cream	4	0.6	24
203	38G	rmoc/cream	24	1.5	30
204	27M	rm	10	0.8	40
205	36J	bm	14	0.85	42
206	36J	rm	6	0.8	26
207	43G	om	32	1.4	24
208	34B	rrc	32	1.3	36
209	40E	omoc	16	1.3	38
210	33A	pcoarse	10	1.2	
211	41K	om	8	0.5	38

212	29C	dbm	12	0.75	38
213	33D	om	14	1.2	
214	33D	om	8	1	30
215	34I	lbm	24	0.8	34+
216	34I	lbm	12	1	23

<u>Figure 200</u>

217	20G	rm	4	0.6	
218	23I	rm	6	0.6	19
219	16I	rrc	10	1	13
220	5I	cm	70	1.3	28+
221	5I	rcp	34	1.2	30+
222	5I	rm	10	0.8	
223	5I	rm	4	0.6	12
224	5I	rm	4	0.6	26
225	5I	rm/bm	4	0.7	23
226	42I	rm	30	0.8	30+
227	42I	rm	8	0.8	28
42I	lbmoc	14	0.9	36+	
11K	rmoc	44	1.2	28+	
11K	om	16	0.8	28+	
11K	rm	10	0.55	26	
5J	rm	24	0.95	16+	
5J	rm	18	0.85	36+	
5J	rm	4	0.6	16	
41F	rmoc/cream	26	0.8	16	

<u>Figure 201</u>

9B	rm	18	1.1	30
12B	rm	8	0.8	24-28
19E	rm	13	0.9	
21D	rmopc	20	1.1	18
17B	rrc/bgm	12	0.7	19
19B	dbm	4	0.7	
14C	dbolbc/lomoc	38	1	26
14E	rmoyc	6	0.9	10
19B	dbmoyc/omoc	18	0.9	
14D	rc	36	1.5	
21F	rmoc	16	0.6	16
21F	rmoc	12	1	16
21F	rmoc	4	0.5	36
16F	rmoycc	48	1.2	26
9F	rm	6	0.7	
14D	c	8	1.2	
5F	rm/c	4	0.35	
9J	rmoc	14	1.1	
6F	rmooc	14	0.9	
13G	bmoc	28	1.4	

8J	rmoc/cream	35	1.1
20G	c	6	0.7

Figure 202

258	22D	c	16	1.3	
259	36D	rc	14	1.2	
260	36D	rm	2	0.65	
261	16F	ocp/om	6	0.7	
262	21H	rmocs	96	1.6	
263	9J	rm	4	0.7	
264	8J	rmoc	30	0.9	10
265	8J	rm	6	1.1	
266	20G	dbopc	28	1.15	
267	15K	bmoc	48	1.3	
268	44J	omoc	14	0.9	14
269	36G	rm	14	0.8	4
270	19A	cc	12	0.8	11

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